THE OIL WEEKLY

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The Oil Man's Calendar

FEB.	
9–12	**American Institute of Mining and Metallurgical Engineers, Annual Meeting, New York.**
10	**American Petroleum Institute, Division of Production, Pacific Coast District, Los Angeles.**
26–27	**American Petroleum Institute, Division of Production, Southwestern District, Dallas, Texas.**
28	**North Texas Oil and Gas Association, Wichita Falls, Texas.**
MAR.	
23–25	**American Society of Mechanical Engineers, Houston, Texas.**
26–27	**American Petroleum Institute, Division of Production, Mid-Continent District, Tulsa.**
APRIL	
9–10	**American Petroleum Institute, Division of Production, Eastern District, Pittsburgh.**
16–17	**National Petroleum Association, Thirty-ninth Semi-Annual Meeting, Hotel Cleveland, Cleveland, Ohio.**
21–24	**American Association of Petroleum Geologists, Twenty-seventh Annual Meeting, Cosmopolitan Hotel, Denver, Colorado.**
22–24	**Petroleum Industry Electrical Association, Shreveport, Louisiana.**
MAY	
25–28	**American Petroleum Institute, Mid-Year Meeting, Biltmore Hotel, Oklahoma City.**
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9–13	**American Petroleum Institute, Chicago.**

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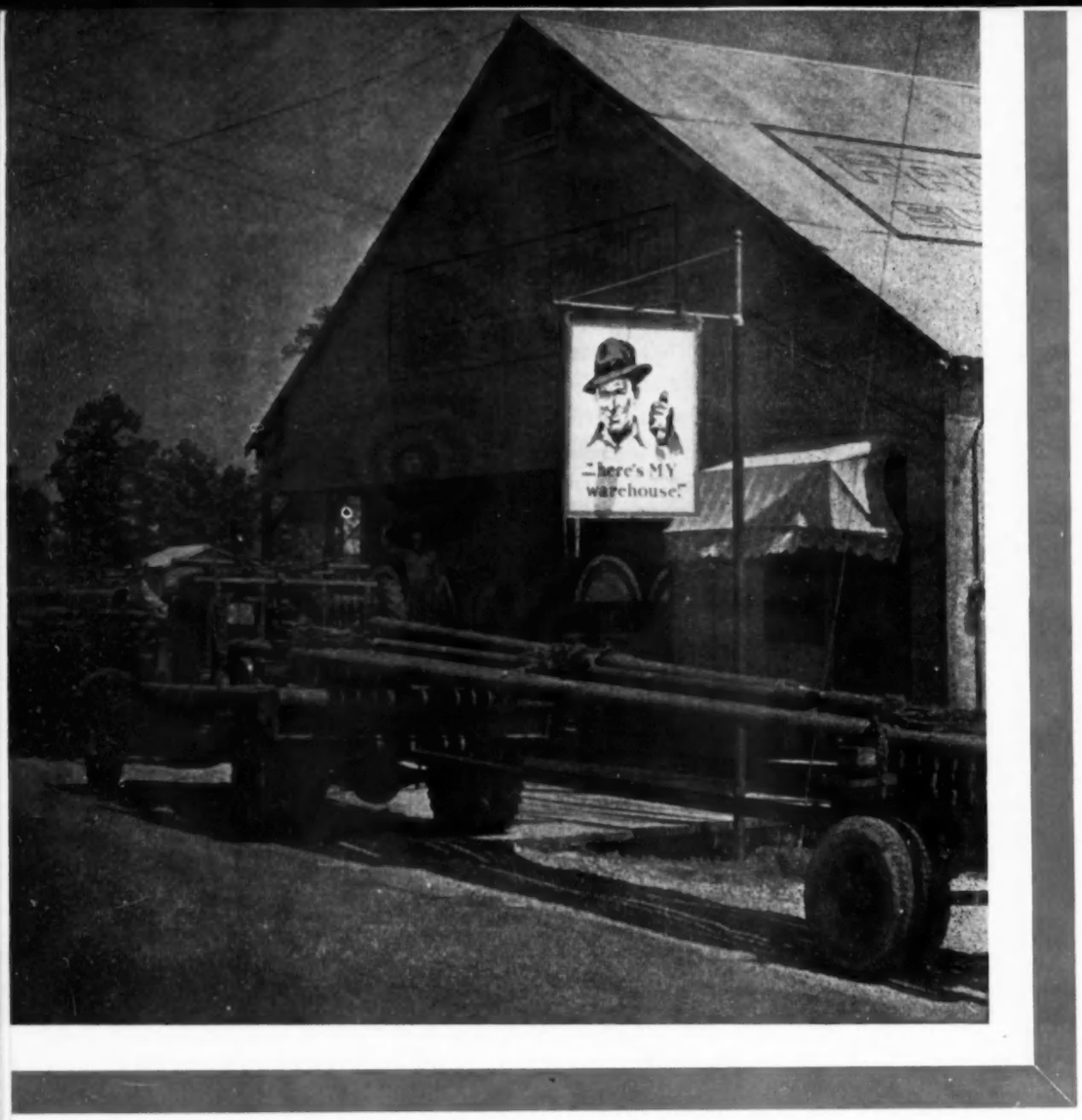

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THE OIL WEEKLY

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THE OIL WEEKLY

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1941 The Changing Panorama 1942

THE world's oil industry as a whole had in 1941 a comparatively good year, in which use and production of petroleum products reached new highs. Extraordinary increases in the United States outweighed the retarding effects of war upon Europe, the Near East, and other areas, with the U. S. A. accounting as usual for almost two thirds of the industry's operations.

For 1942, however, the outlook is greatly obscured by involvement of the United States in the war and by the fighting in the Far East. As the American division of the petroleum industry is bent, the world oil industry is inclined; and with the fortunes of the American oil industry now largely dependent on military necessities and exigencies, the world picture in oil henceforth will be darkened more than ever by the clouds and smoke of war.

Outlook for Demand . . .

In the United States there is in prospect a possible curtailment of 5 to 7 percent in the total demand for petroleum in 1942 as compared with 1941, because of the shortage of tires, limitations of tanker transportation facilities, and other factors; although some think reduction of civilian gasoline consumption may be compensated by greater exports to the country's allies and by sharp increases in domestic military needs.

During 1941, the petroleum industry of the United States encountered the greatest demand for its products in all its history, with domestic consumption alone exceeding combined home use and exports of any previous year.

Exports were down nearly 50 percent because of the war, but domestic demand was up by the exceptional amount of 12 percent, a combination of factors that indicated an 8 percent increase in total demand for all oils.

Among the individual products, aviation gasoline showed the most noteworthy increase in demand, with both domestic use and exports sharply higher. However, requirements for lubricants also were up exceptionally, despite failure of exports to equal those of the previous year; and demand for residual fuel oil showed an increase somewhat larger than the average for all oils in the aggregate. Both gasoline and heating oil were consumed in the United States in quantities 12 percent larger than in 1940, but exports were somewhat lower.

Storage Situation . . .

Whereas the industry normally has had to be concerned heretofore with excessive rather than deficient stocks of crude oil and petroleum products, it reached the end of 1941 with stocks very close to minimum requirements, considering the uncertainties and difficulties created by the war. Inventories of some products appeared, in fact, smaller than desirable.

Stocks of all oils totaled about 553,500,000 barrels on December 31, 1941, having been reduced 10,500,000 barrels within the year. That was a decrease of only 2 percent in actual volume, but it amounted to 10 percent when figured on the basis of days' supply at current rates of consumption as compared with a year ago.

Stocks of refinable crude oil in the United States were 20,000,000 barrels lower at the end of 1941 than at the close of 1940, and those of heavy crude in California were off 2,000,000, while inventories of natural gasoline were down nearly 2,000,000.

In actual volume, stocks of all refined products are 5 percent larger than a year ago, being up 13,000,000 barrels, but in terms of days' supply they are 4 percent lower.

Analysis of the stocks situations of individual products indicates scarcities or threats of scarcities of lubricants, heavy fuel oils, and natural gasoline, as well as aviation gasoline. With exception of aviation gasoline, these products are held in smaller actual quantities than a year ago, although they are being used in materially larger volume.

Crude Oil Production . . .

Despite the war, world production of crude oil climbed to a new peak of 2,223,391,000 barrels in 1941. However, it appears doubtful if that record will be exceeded in 1942, in view of a possible decrease in demand and production in the United States, which accounts for over 60 percent of world output.

Even outside the U. S., there was an indicated gain in production in 1941, to 820 millions of barrels from 798 millions in 1940, with the Far East steady and Russia and Venezuela up substantially.

In the United States, output

jumped 50,000,000 barrels to a new high of 1,403,784,000 in 1941, as wells were drawn upon heavily in the latter half of the year.

Cumulated world production of crude was close to 40 billions of barrels at the end of 1941, including 25 billions for the United States (64 percent) and 15 billions for all other countries combined.

Drilling in 1941 and 1942 . . .

Recently issued government priorities and spacing orders presage drastic curtailment of drilling.

On the basis of restrictions imposed by these orders and data obtained from many companies, it is calculated that the probable number of wells to be completed during 1942 will be 16,830, a drop of 48 percent. But due to the development of deeper fields producing high-octane crudes and condensates, the probable footage drilled may not be more than 30 percent less than the 95 million feet drilled in 1941.

During 1941, drilling approached very near to the record proportions of 1920 and 1937 and exceeded that of 1940 by 7 percent.

The completions of 1941 involved drilling of the most footage in the history of the industry except in 1937, when completions were more numerous. The average depth reached was 2967 feet, compared with 3065 feet in 1940.

The past year brought a further increase in drilling below 10,000 feet. And in view of the prospective large demand for high octane gasoline, deep drilling is not expected to suffer henceforth, despite the fact that deep tests require more steel than shallower holes. During the past year, 423 tests were drilled below 10,000 feet, increasing the total of 10,000-foot wells for all years to 1133, and the 1941 development opened 13 new producing zones.

Field Discoveries . . .

As yet the United States is not experiencing difficulty in finding new petroleum supply sources, having discovered during 1941 the greatest number of both new fields and new producing horizons in previously known pools ever attained in a 12-months period. The finding last year of 613 new supply sources, comprised of 346 entirely new fields and 267 new producing horizons in known pools, constituted an amazing increase of 119 over the previous peak level of 494 achieved during 1940. During the past five years, 2370 new petroleum supply sources, made up of 1339 entirely new structures and 971 new productive formations in old fields, have been discovered.

Since the finding of new supply sources will become progressively more difficult when the country nears exhaustion of its possible producing structures, this record of consistent discoveries indicates a probable continuation of comparatively high rates of discovery. Even the anticipated decline in overall drilling, due to the steel shortage restricting delivery of machinery, may not retard exploratory work—for government priority regulations encourage the drilling of wildcat tests by making equipment more readily available for this type of activity than for operations in proven fields.

Less Oil Found . . .

But apparently, the larger number of fields being found are less prolific than in the past, for the volume of oil discovered barely exceeded the 1940 quantity and was substantially beneath the levels of 1939, 1938 and 1937. Excess over production was the smallest since 1935, having amounted to only 499,560,000 barrels. But since crude reserves of the nation were at a peak a year ago, even this small addition carried the known unproduced supplies to another record height—estimated to be 19,524,075,000 barrels on January 1, 1942.

Producing Oil Wells . . .

Although an exceptionally large number of wells were drilled in the United States last year, 2200 fewer producing wells were completed, and consequently the rate of increase in the nation's producing wells was not in keeping with past performances. The lessened addition to the number of producing wells was further accelerated by the abandonment of more wells — 11,075 as compared with 9883 in 1940.

However, the completion of 19,519 productive oil wells provided a net gain of 8444 wells, and the country's number of producing oil wells rose to another peak of 400,061 on December 31, 1941.

Refinery Activity . . .

Military requirements made strong imprints on refinery operations in 1942, and will have even greater influence in coming months.

Last year crude runs to stills averaged 3,892,200 barrels daily, or about 350,000 barrels more than in the previous year. The 4-million-barrel mark was reached in August, and held above that figure for the remainder of the year. This peak activity necessitated expansion of refining capacity, and operations of plants were near full rating.

Currently, the refining industry is engaged in a stupendous expansion of its plant capacity for the purpose of meeting military demands, but this does not promise to create a barrel-for-barrel call upon oil production. Most of the enlargement program is for the manufacture of aviation gasoline, synthetic rubber and toluol explosives, which are made by further processing of gases from topping and cracking operations and from certain gaseous products of natural gasoline plants.

Tanker Fleet . . .

In a program designed to give the United States more oil tankers than any other nation during 1943, the first 11 months of 1941 saw 26 such vessels launched, for an average of slightly more than 2 a month. But 1942 is due to see this average raised to 7 per month, and 1943 is to be even higher.

The present program calls for construction of 208 new oil water carriers, but this may be expanded now that the nation is at war. Currently the United States has approximately 380 tankers, so the nation's tanker fleet will be well in excess of 500 within the next two years despite possible wartime sinkings.

Pipe Line Construction . . .

The war was largely responsible for a quick upturn in pipe line construction activity during 1941, as new systems were laid and old ones were enlarged in the United States, to offset the diversion of tankers. But war now dims the outlook through creating a situation whereby it may be difficult to obtain necessary materials, unless a high project priority rating is procurable.

Crude oil, gasoline and natural gas lines completed in 1941 totaled 7300 miles and an additional 768 miles were still under construction at the close of the year. This was almost double the 1940 pace.

Editorial Comment

Cutting the Cloth Too Small?

By RAY L. DUDLEY, Publisher

ELSEWHERE in this issue of THE OIL WEEKLY will be found an estimate as to the number of wells likely to be drilled in the United States under the present provisions of M-68. It contemplates a 48-percent drop in the number of wells to be drilled, but only a 30-percent drop in footage.

Word from Washington indicates that OPM is thinking in terms of an even smaller number of wells, of which about 6000 would be wildcats. It is a coincidence that THE OIL WEEKLY staff computations used in making the estimate of 16,830 wells for 1942 put wildcat drilling at about 6000 wells.

There is no doubt that the Coordinator is desirous of raising the reserves of the country and of course it would be a fine thing if the reserves could be increased during war time. But we believe that too much emphasis is being put on wildcat drilling, because we have an idea that all the steel available will be needed to drill on proven locations.

Let us study the figures and see what they mean.

Subtracting the 6000 wildcat wells from the 16,800 we calculate will be drilled under M-68, we have left 10,800 wells, which will include oil and gas wells, water-input wells, and a small percentage assignable to failures even in proven areas. Last year approximately 11.6 percent of the 22,117 successful wells drilled were gas wells, leaving 19,532 oil wells, and if this same percentage obtains in 1942, there will be only 9550 wells left to include producing oil wells in proven areas, water-input wells, failures, etc., and it is not unreasonable to figure that about 9000 of these wells will be oil producers. However, wildcat drilling campaign of 6000 wells ought to complete about 600 producing wells of all kinds, part of which will, of course, be gas wells. Thus we could reasonably expect to add 9500 producing oil wells in 1942.

Will 9500 new producing oil wells do the job required, when last year there were 19,532 completed? Even if we speculate that these 9500 wells will be, on the average, better wells than those which made up last year's 19,532, will they still be able to do the job?

We know of course that some of the many wells which have been drilled during the past several years have been poorly spaced. Lease requirements in some instances and plain greed in others caused this poor spacing. But today it probably is better that they were drilled, even though poorly spaced, than not to have been drilled at all—although the same number of wells, properly spaced, would have put us in much better position right now.

We wish to make three points in our analysis of the situation.

One is that OPM may be cutting the cloth entirely too small for the garment required.

The second is that such limitations of materials as are in prospect for 1942 cannot continue next year without seriously impairing the ability of the industry to deliver the needed oil.

We do not believe that anyone in the oil industry doubts the ability of the industry to deliver the oil needed by the nation—but, this is important: it may be that we shall have to damage seriously our proven reserves to do it if drilling is restricted too much by limitation of equipment. And that brings us to our third point:

Is it better to use the steel in wildcat drilling to bring in new reserves, or to use it to help conserve the reserves already discovered through such drilling as will permit an orderly withdrawal from the reserves? Or, stated another way, is it wise to put as great a percentage of materials into wildcat drilling as is now contemplated?

War Affects Oil Use

Sharp rise in 1941 domestic use outweighs export losses; but disruption of upward trend now likely

By L. J. LOGAN, Associate Editor

THE oil industry of the United States encountered record-breaking total demand for its products in 1941, as a precipitous drop in exports was greatly outweighed by a sharp rise in domestic consumption in response to the extraordinary activity induced by the national defense program.

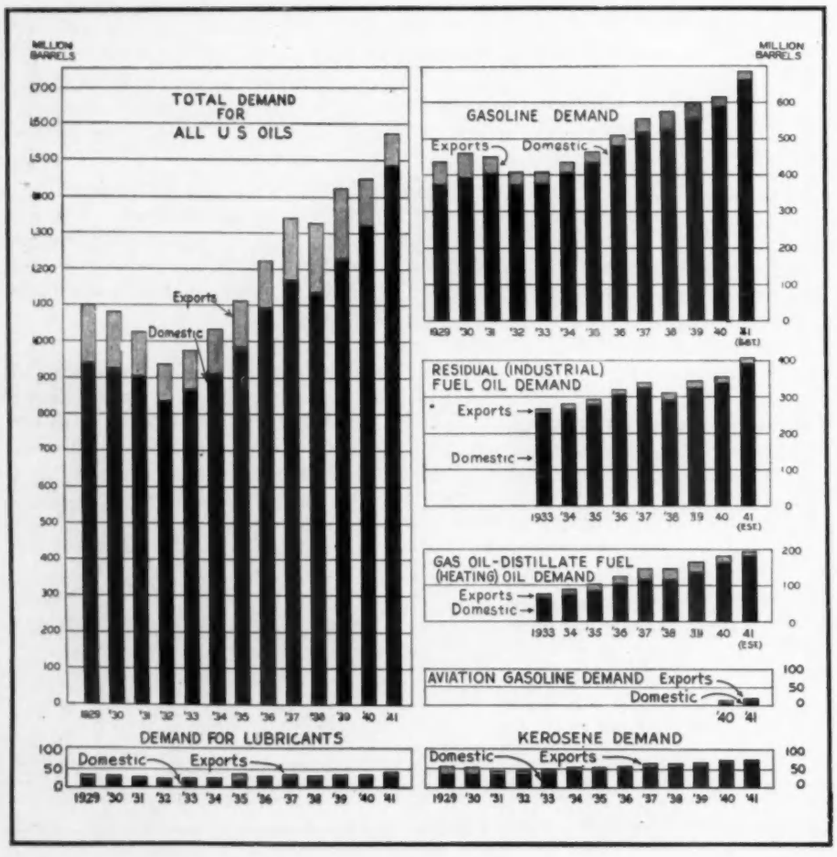
Total demand for all oils, for domestic use and export, was 120,000,000 barrels (8 percent) greater in 1941 than in 1940, having totaled approximately 1,577,000,000 barrels, a new high. Exports were down 40,000,000 barrels (45 percent) to about 90,000,000, in reflection of the war. But domestic consumption was up 160,000,000 barrels (12 percent), to about 1,487,000,000, a figure that exceeded combined home use and exports of any previous year.

For 1942, however, it is doubtful if total demand will show any increase; and some economists foresee a possible decrease of 5 to 7 percent.

Because of the shortage of rubber and the virtual elimination of sales of new automobiles for civilian use, it is expected that demand for gasoline will decline in 1942. Consumption of that product has continued materially above the year-ago trend so far in 1942, but curtailment of use is anticipated in coming months, with the third quarter (season of vacation travel) expected to make an especially poor comparison with that of 1941.

Helping to offset a probable decrease in domestic gasoline consumption, however, will be increased domestic demand for heavy fuel oil, aviation gasoline, and lubricants, in reflection of military and industrial use for war purposes; while exports also probably will expand, in furnishing oils to the nation's allies.

Petroleum Demand Up in 1941, as Domestic Use Alone Exceeds Previous Year's Needs for Home Consumption and Export


MILLION BARRELS
TOTAL DEMAND FOR ALL U S OILS
Exports
Domestic
GASOLINE DEMAND
RESIDUAL (INDUSTRIAL) FUEL OIL DEMAND
GAS OIL-DISTILLATE FUEL (HEATING) OIL DEMAND
AVIATION GASOLINE DEMAND
DEMAND FOR LUBRICANTS
KEROSENE DEMAND
1929 '30 '31 '32 '33 '34 '35 '36 '37 '38 '39 '40 41

Aviation Gasoline

Among the most noteworthy developments to be expected in connection with demand for petroleum products is a percentagewise phenomenal expansion in use of aviation gasoline, brought about by the war. Late in 1941, the petroleum industry of the United States was producing 7½ times as much super-aviation, 100-octane motor fuel as the output of all grades of aviation fuel only three years previously, in turning out about 50,000 barrels (or 2,100,000 gallons) daily. Production had just been stepped up overnight by 15 to 20 percent, from 44,000 barrels, or 1,800,000 gallons, daily, through government permission to use 4 cubic centimeters instead of 3 of tetraethyl lead per gallon, despite the fact that it had been contended by some engineers that too much lead caused clogging of lines and was unsafe in aviation use. The alternative to using increased proportions of lead is to use as base stocks gasolines of higher-octane rating naturally, and selective use of West Texas, Gulf Coast, and other crudes yielding such gasolines may be expected to contribute toward expansion of the capacity for turning out 100-octane aviation gasoline. Plans openly divulged by the government, even before the United States became a belligerent, called for tripling of the capacity for making 100-octane aviation gasoline, that is, increasing it above 120,000 barrels daily

Total Demand for Oil Up Despite Drop in Exports

For 1940, figures are final statistics of Bureau of Mines; for 1941, first 9 months based on Bureau of Mines monthly figures and last 3 months estimated.

ITEM	(Millions of Barrels) 1940	1941	Percent Change
All Oils:			
Domestic	1,326.6	1,487.0	+12.1
Export	130.5	90.0	—44.7
Total	1,457.1	1,577.0	+ 8.2
Motor Fuel:			
Domestic	589.5	661.4	+12.1
Export	25.4	23.3	— 9.0
Total	614.9	684.7	+11.3
Aviation Gasoline:			
Domestic	6.7	11.6	+73.1
Export	4.5	5.4	+20.0
Total	11.2	17.0	+51.7
Kerosene:			
Domestic	68.7	71.5	+ 4.1
Export	3.4	2.3	—47.8
Total	72.1	73.8	+ 2.4
Gas Oil and Distillate Fuel:			
Domestic	160.8	180.8	+12.4
Export	19.1	15.5	—23.2
Total	179.9	196.3	+ 9.1
Residual Fuel Oil:			
Domestic	340.1	292.4	+15.4
Export	16.1	14.4	—11.8
Total	356.2	406.8	+14.2
Lubricants:			
Domestic	24.7	31.9	+29.1
Export	10.5	9.7	— 8.2
Total	35.2	41.6	+18.2

by the middle or possibly the beginning of 1943. Those plans indicated that as against production of about 15,000,000 barrels of aviation gasoline of all grades in 1940 and 20,000,000 in 1941, the country would produce from 26,000,000 to 30,000,000 barrels of super-aviation, 100-octane grade in 1942, or an average of 72,000 to 83,000 barrels daily during the year, against a recent capacity of only 40,000 barrels daily. For a large part of the production, current demand, domestic and export, apparently is contemplated. The total demand for all aviation gasoline in 1940 was only 11,200,000 barrels, including 6,700,000 for domestic use and 4,500,000 for export, and that in 1941 was about 17,000,000 barrels, including 11,600,000 for domestic consumption and 5,400,000 for export

Lubricating Oil

Lubricating oil is another petroleum product that has been put into exceptionally great demand through the war, and requirements doubtless will be materially larger in 1942 than in 1941, because of heavy military use and increased shipments to war allies and because of further stepping up of the industrial production. Total demand for lubricants was approximately 41,600,000 barrels in 1941, or 18 percent more than that of 35,200,000 barrels in 1940, despite a decrease of about a million barrels in exports, domestic consumption having increased 29 percent, to 31,900,000 from 24,700,000 barrels.

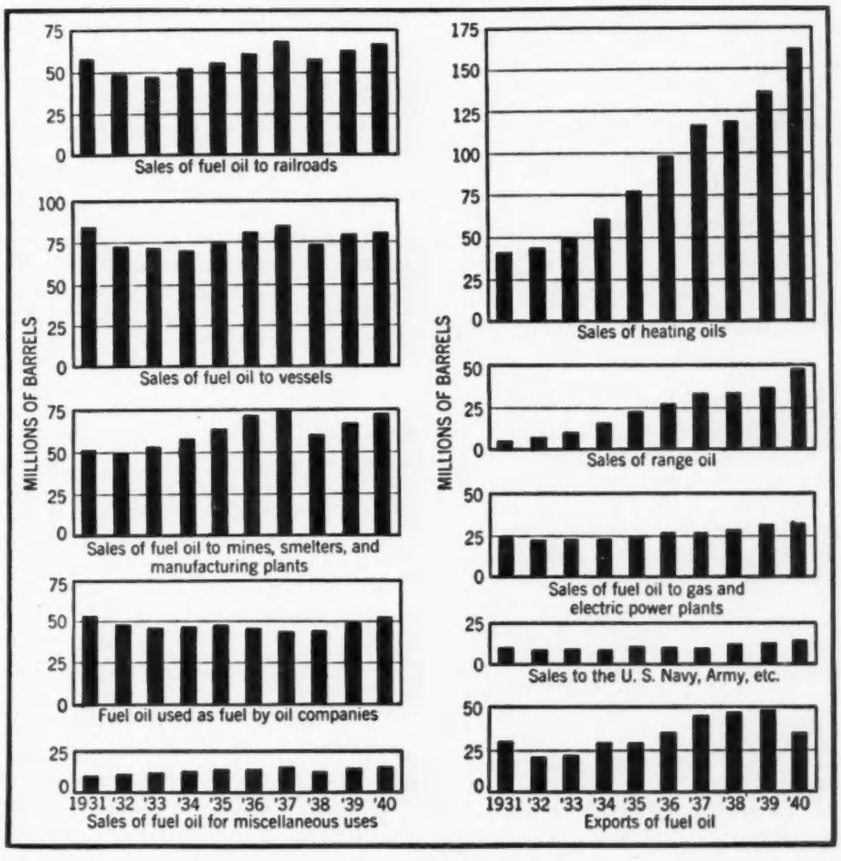
Residual fuel oil, like aviation gasoline and lubricating oil, will take a highly important role in the prosecution of the war, and although demand was up sharply in 1941 it probably will further increase in 1942, even if the government places restrictions upon the limited consumption that is not essential for waging the war. The heavy fuel oils are used by the railroads, merchant ships, mines, smelters, factories, gas and electric power plants, and oil companies, as well as by the Navy and Army, and in addition, substantial quantities are exported. Requirements for all these purposes will be stimulated in 1942, as most of the uses will be essential in the war program, about the only important possibility for curtailment of use being that of inducing power plants to substitute coal for oil as fuel. The total demand for residual fuel oil in 1941, approximately 406,800,000 barrels, was 14 percent (50,000,000 barrels) above that of 356,200,000 barrels in 1940, although exports were off nearly 2,000,000 barrels to about 14,400,000, the domestic requirements having risen 15 percent (52,000,000 barrels) to 392,400,000 from 340,100,000 barrels.

Motor fuel demand was up 11 percent (70,000,000 barrels) in going from 614,900,000 barrels in 1940 to about 684,700,000 in 1941, although exports were down about 2,000,000 barrels to 23,300,000, with domestic consumption up 12 percent (72,000,000 barrels), from 589,500,000 to 661,400,000 barrels.

Gas oil and distillate fuel was required in 9 percent greater volume in 1941 than in 1940, an increase of over 16,000,000 barrels. While exports dropped 23 percent (3,500,000 barrels) to 15,500,000 barrels, domestic use increased 12 percent (20,000,000 barrels), from 160,800,000 to about 180,800,000 barrels.

Fuel Oils Assume Relatively Greater Importance Than Normally as War Requires Heavy Use

This chart, reproduced from *Minerals Yearbook, Review of 1940,* shows sales of fuel oils, by uses, from 1931 through 1940, latest year for which figures are available. Further increases in all domestic uses and further decreases in exports are indicated for 1941; and for 1942, military and industrial consumption doubtless will show additional expansion, while aid to anti-Axis allies may swell exports. Relative importance of fuel oils among petroleum products is attested by the fact that in 1941 they accounted for 38 percent of the total demand for all oils, or nearly as large a proportion as motor fuel, which constituted 43 percent.


MILLIONS OF BARRELS
Sales of fuel oil to railroads
Sales of fuel oil to vessels
Sales of fuel oil to mines, smelters, and manufacturing plants
Fuel oil used as fuel by oil companies
Sales of fuel oil for miscellaneous uses
1931 '32 '33 '34 '35 '36 '37 '38 '39 '40
Sales of heating oils
Sales of range oil
Sales of fuel oil to gas and electric power plants
Sales to the U. S. Navy, Army, etc.
Exports of fuel oil

World Production Outlook

Output rises to new peak during 1941, but spread of war likely to check recent steady upward trend

FOR the world's oil industry, as for the great mass of the world's inhabitants, Axis dreams of a new order on earth have brought trouble and loss, without compensations.

War's devastation sprang on the industry in 1939 and 1940 mostly in Europe and the Near East, when refineries, storage, and wells were destroyed, while many tankers were sunk. But in 1941, destruction of oil industry properties and wiping out of markets descended upon the Far East and the Western Hemisphere in an apparent prelude to worse developments in store for 1942.

The United States accounts for two thirds of the world oil industry, and while that large component continued to proceed on a near-normal basis, the industry as a whole did not appear to suffer tremendously.

But now the great American segment, as well as the other third, has been dislocated and confronted with the myriad hazards and obstacles involved in active belligerency; and henceforth, the fortunes of the world's oil industry will be wholly interwoven with the fortunes of war.

World production of crude oil normally pursues a steady upward trend, in response to constantly growing use of petroleum products. But in contrast with an increase of 4.6 percent in world output in 1939 over the previous year, there were gains of only 3.5 percent in 1940 and 3.4 percent in 1941, despite extraordinary expansion of use in the United States; and for 1942, there is in prospect almost certainly no increase whatever in consumption and production of petroleum and quite likely a decrease that may amount to as much as 5 percent.

Some economists think that United States demand for crude oil and production thereof may not show any substantial decrease in 1942, but most of them concede that shortage of tires and other factors may reduce total petroleum demand 5 to 7 percent. Curtailed in such percentages, U. S. crude production would be off 70 to 100 millions of barrels. If production in the rest of the world meanwhile continued about unchanged, such decreases in the United States would have the effect of causing a drop of 3 to 4.5 percent in world output of crude.

War continued last year to exert its abnormal influence on many countries abroad, and there is no doubt that this effect will persist through 1942. In some countries, such as Venezuela and Canada, war has accelerated oil production because sufficient transportation and markets have been available to make expansion possible in meeting military needs. Elsewhere, effects have been bad not only because of loss of transportation and markets but also because drilling equipment has been difficult to get for one reason or another.

Contrast in Mexico and Canada

Mexico was one of those oil countries which suffered last year. Curtailment of former profitable outlets in Japan and Europe by reason of the war and lack of tankers led to a crude production drop of over 20 percent from the 44,000,000 barrels produced in 1940. A further difficulty was the obsolete state of much of the country's refining industry. Last year, Mexico's chief outlet was the United States, although some oil products were exported to a few South American countries, Australia and Cuba. Mexico's outlook for this year is not promising, because the same conditions existing in 1941 evidently will continue.

Canada last year enjoyed a war boom, having produced practically 10,000,000 barrels of crude, an all-time record and 9 percent over 1940. Turner Valley continued to yield over 95 percent of the country's output of crude. Last October the field was extended 20 miles northward by completion of Major Oil Investments 3, with an initial oi 1548 barrels daily on test. The Alberta Conservation Board has predicted a winter of record activity in the province, particularly in Turner Valley. Continuation of extensive drilling and a probable rise in production and refining may be anticipated in Canada this year. British needs for Canadian oil products should be at least as large as they were last year. As the 20-mile extension recently showed,

Detailed World Production Figures, by Counties, by Years, Are Presented on Pages 42, 43 and 44.

Venezuela Leads South America

In South America, Venezuela led the procession in reaching a record crude production of 223,000,000 barrels, compared to 185,000,000 barrels in 1940, an increase of 20 percent. Production climbed steadily last year under war-time demands, most of the crude going to the refineries at Aruba and Curacao and at Caripito. Marked increases occurred in eastern Venezuela subsequent to completion in the latter part of 1940 of laterals from the Mene Grande trunk line to the San Joaquin and Roble fields. In the east, several new fields were being developed.

Venezuelan prospects for 1942 are unquestionably bright. Venezuelan Petroleum Company probably will complete this year a 100-mile, 12-inch line from the Santa Barbara field to Puerto la Cruz, thus opening this new field, where about 14 wells have been drilled in an intensive program. The Leona area field of Mene Grande Oil Company is about to be opened with completion of a 53-kilometer line

from the field to the Mene Grande trunk line. With the opening of Standard of Venezuela-Pantepec's new Mulata field this month, construction of a 12-mile extension to Standard's pipe line from the Jusepin field to Caripito is in prospect. Refining capacity of Lago Oil and Transport Company's plant at Aruba will be materially enlarged when the company's $10,000,000 expansion program begins the middle of this year.

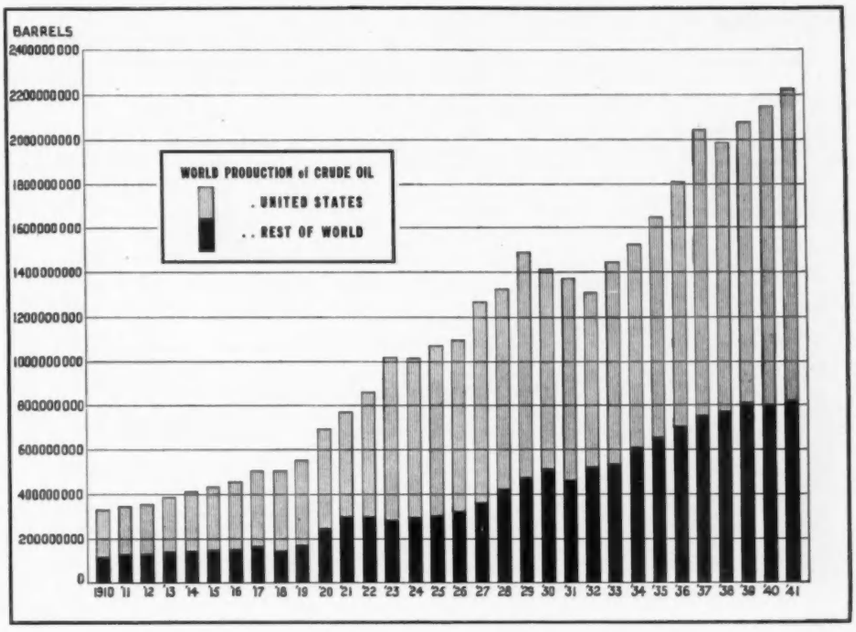
Colombia Needs New Fields

In Colombia, second producing country of South America, crude production last year was 24,313,000 barrels, a drop of about 7 percent from 1940 production. The country faced two difficulties. One was a shortage of tankers to take crude from the Barco and De Mares fields; only a small percentage of Colombian crude is refined in the country. The other was failure, despite considerable testing of the Magdalena River valley, to develop new fields. Several wildcats were drilling or testing at the end of the year on the Barco. The one bright spot in Colombian operations was Shell Oil Company of Colombia's Casabe 1, on the left bank of the Magdalena River across from Barranca Bermeja, which developed a reported daily production of about 500 barrels. Several tests were abandoned in the valley.

Efforts to modify Colombia's oil law of 1936 to encourage drilling on private lands were defeated when congress adjourned in December without passing proposed amendments. No well has been drilled on private lands in recent years. Since the producing fields of the De Mares and Barco concessions have evidently reached their capacity, and because 19 of the 20 wildcats completed since 1937 have proved unproductive, Colombia is badly in need of new fields. Shell's Casabe 1, of course, gives hope that production will be opened in the valley. Furthermore much exploration is under way in the Llanos, or plains region, by companies including Socony-Vacuum, Tropical Oil and Shell affiliates.

Argentina Production Up

Argentina increased production in 1941 to a new high of 21,639,000 barrels, compared to 20,486,000 in 1940. The gain was due entirely to higher government production, which was about 65 percent of the country's total production. Under continued unfavorable government regulations, the private industry is steadily losing ground. The government is continuing exploratory work and endeavoring to expand production of established fields. Developments in the fields of Mendoza province caused their output last year to increase by over 50 percent. The Comodoro Rivadavia field, in which production last year rose 4 percent, still yields over 70 percent of the country's oil. Government drilling this year is scheduled for an expansion if equipment can be obtained from the United States. A month ago the government authorized appropriation up to $5,260,000 for purchase of such materials.



Bolivia and Peru

Elsewhere in South America more or less development is under way and should continue through 1942 if needed equipment can be secured. Production in Bolivia last year underwent no material increase, and that in Peru was somewhat down. The Bolivian government oil monopoly is being reorganized in efforts to improve its activities, and several Americans are engaged in aiding the government in this work.

War Clouds Over Asia

War has completely upset operations in the Near East and Far East, Iranian production probably was down a little in 1941 from the 78,592,000 barrels reported for 1940. Over the same period, production in Iraq fell from 25,725,000 to a little less than 10,000,000 barrels. Loss of former European markets by war in the Mediterranean has hit those rich areas, and apparently the slump will continue for a while. In the Far East, the Netherlands East Indies, leading oil center, where production had been steadily climbing prior to the war, produced 62,087,000 barrels in 1939, but production there subsequently has been about unchanged. Although official data are not available, the output last year apparently was around 62,000,000 barrels. The outlook for 1942 operations in the Far East is, of course, completely clouded and appears dark.

No Reports From Europe

As for Europe, little can be said of last year's and prospective 1942 developments. Attempts will be made to further expand Russia's indicated crude output of about 226,000,000 barrels in 1941, which compared with annual production of 212,000,000 barrels in 1939 and 1940. Considerable exploratory work was reported to be under way last year. War-torn Rumania probably produced only about 36,000,000 barrels in 1941, as compared with 43,000,000 barrels in 1940. Interruption of normal drilling and bombings by the Russians were reported to have offset efforts by the Germans to expand production there, although reliable data are not at hand.

World Crude Oil Production, by Countries, by Years

(Complete production history of world, in thousands of barrels of 42 U. S. Gallons. Sources: *Mineral Resources* and *Minerals Yearbook*, except as otherwise indicated.)

	EUROPE													AFRICA			
YEAR	Albania	Czechoslovakia	England	France	Germany	Austria	Hungary	Italy	Poland	Roumania	[B]U.S.S.R (Russia)	Other Europe	[B]Total Europe	Egypt	Algeria	Other Africa	Total Africa
1857	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2	.....	.....	.....	.....
1858	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	4	.....	.....	.....	.....
1859	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	4	.....	.....	.....	.....
1860	.....	.....	.....	.....	.....	.....	.....	D	.....	9	.....	.....	9	.....	.....	.....	.....
1861	.....	.....	.....	.....	.....	.....	.....	D	.....	17	.....	.....	17	.....	.....	.....	.....
1862	.....	.....	.....	.....	.....	.....	.....	D	.....	23	.....	.....	23	.....	.....	.....	.....
1863	.....	.....	.....	.....	.....	.....	.....	D	.....	28	41	.....	69	.....	.....	.....	.....
1864	.....	.....	.....	.....	.....	.....	.....	D	.....	33	65	.....	98	.....	.....	.....	.....
1865	.....	.....	.....	.....	.....	.....	.....	2	.....	39	67	.....	108	.....	.....	.....	.....
1866	.....	.....	.....	.....	.....	.....	.....	1	.....	42	83	.....	126	.....	.....	.....	.....
1867	.....	.....	.....	.....	.....	.....	.....	1	.....	51	120	.....	172	.....	.....	.....	.....
1868	.....	.....	.....	.....	.....	.....	.....	D	.....	56	88	.....	144	.....	.....	.....	.....
1869	.....	.....	.....	.....	.....	.....	.....	D	.....	59	202	.....	261	.....	.....	.....	.....
1870	.....	.....	.....	.....	.....	.....	.....	D	.....	84	204	.....	288	.....	.....	.....	.....
1871	.....	.....	.....	.....	.....	.....	.....	D	.....	90	165	.....	255	.....	.....	.....	.....
1872	.....	.....	.....	.....	.....	.....	.....	D	.....	91	185	.....	276	.....	.....	.....	.....
1873	.....	.....	.....	.....	.....	.....	.....	D	.....	104	475	.....	579	.....	.....	.....	.....
1874	.....	.....	.....	.....	.....	.....	.....	1	150	103	583	.....	837	.....	.....	.....	.....
1875	.....	.....	.....	.....	.....	.....	.....	1	158	108	697	.....	964	.....	.....	.....	.....
1876	.....	.....	.....	.....	.....	.....	.....	3	164	111	1,321	.....	1,599	.....	.....	.....	.....
1977	.....	.....	.....	.....	.....	.....	.....	3	170	108	1 801	.....	2,082	.....	.....	.....	.....
1878	.....	.....	.....	.....	.....	.....	.....	4	176	109	2.401	.....	2,690	.....	.....	.....	.....
1879	.....	.....	.....	.....	.....	.....	.....	3	215	110	2 761	.....	3,089	.....	.....	.....	.....
1880	.....	.....	.....	.....	9	.....	.....	2	229	115	3,001	.....	3,356	.....	.....	.....	.....
1881	.....	.....	.....	.....	29	.....	.....	1	287	122	3.601	.....	4,040	.....	.....	.....	.....
1882	.....	.....	.....	.....	58	.....	.....	2	330	136	4.538	.....	5.064	.....	.....	.....	.....
1883	.....	.....	.....	.....	27	.....	.....	2	365	139	6.002	.....	6,535	.....	.....	.....	.....
1884	.....	.....	.....	.....	46	.....	.....	3	408	211	10 805	.....	11,473	.....	.....	.....	.....
1885	.....	.....	.....	.....	41	.....	.....	2	465	193	13.925	.....	14,626	.....	.....	.....	.....
1886	.....	.....	.....	.....	74	.....	.....	2	306	168	18,006	.....	18,556	.....	.....	.....	.....
1887	.....	.....	.....	.....	74	.....	.....	1	344	182	18.368	.....	18,969	.....	.....	.....	.....
1888	.....	.....	.....	.....	85	.....	.....	1	467	219	23 049	.....	23,821	.....	.....	.....	.....
1889	.....	.....	.....	.....	68	.....	.....	1	515	298	24.609	.....	25.491	.....	.....	.....	.....
1890	.....	.....	.....	.....	108	.....	.....	3	659	383	28,691	.....	29,844	.....	.....	.....	.....
1891	.....	.....	.....	.....	109	.....	.....	8	631	488	34.573	.....	35.809	.....	.....	.....	.....
1892	.....	.....	.....	.....	101	.....	.....	18	646	593	35.775	.....	37.133	.....	.....	.....	.....
1893	.....	.....	.....	.....	100	.....	.....	19	693	535	40 457	.....	41.804	.....	.....	.....	.....
1894	.....	.....	.....	.....	123	.....	.....	21	949	508	36.375	.....	37.976	.....	.....	.....	.....
1895	.....	.....	.....	.....	121	.....	.....	26	1.453	576	46.140	.....	48,316	.....	.....	.....	.....
1896	.....	.....	.....	.....	145	.....	.....	18	2.444	543	47.221	.....	50.371	.....	.....	.....	.....
1897	.....	.....	.....	.....	166	.....	.....	14	2.226	571	54 399	.....	57.376	.....	.....	.....	.....
1898	.....	.....	.....	.....	184	.....	.....	15	2.376	776	61 610	.....	64.961	.....	.....	.....	.....
1899	.....	.....	.....	.....	192	.....	.....	16	2 314	1.4 6	65 955	.....	69,903	.....	.....	.....	.....
1900	.....	.....	.....	.....	358	.....	.....	12	2,347	1,629	75,780	.....	80,126	.....	.....	.....	.....
1901	.....	.....	.....	.....	314	.....	.....	16	3.251	1,678	85,168	.....	90,427	.....	.....	.....	.....
1902	.....	.....	.....	.....	354	.....	.....	19	4,142	2.060	80.540	.....	87,115	.....	.....	.....	.....
1903	.....	.....	.....	.....	446	.....	.....	18	5.235	2.763	75.591	.....	84.053	.....	.....	.....	.....
1904	.....	.....	.....	.....	637	.....	.....	26	5,947	3.599	78.537	.....	88.746	.....	.....	.....	.....
1905	.....	.....	.....	.....	561	.....	.....	44	5,766	4,421	54.960	.....	65.752	.....	.....	.....	.....
1906	.....	.....	.....	.....	579	.....	.....	54	5 468	6 378	58.897	.....	71,376	.....	.....	.....	.....
1907	.....	.....	.....	.....	757	.....	.....	60	8,456	8.118	61.851	.....	79.242	.....	.....	.....	.....
1908	.....	.....	.....	.....	1,009	.....	.....	51	12.612	8.252	62.187	.....	84,111	.....	.....	.....	.....
1909	.....	.....	.....	.....	1,019	.....	.....	42	14.933	9.327	65.970	.....	91,291	.....	.....	.....	.....
1910	.....	.....	.....	.....	1,032	.....	.....	51	12.673	9,724	70.337	.....	93,817	.....	.....	.....	.....
1911	.....	.....	.....	.....	1,017	.....	.....	75	10.519	11.108	66.184	.....	88,903	21	.....	.....	21
1912	.....	.....	.....	.....	1.031	.....	.....	54	8.535	12.976	68.019	.....	90,615	214	.....	.....	214
1913	.....	.....	.....	.....	857	.....	.....	47	7.818	13.555	62 834	.....	85.111	98	.....	.....	98
1914	.....	.....	.....	.....	781	.....	.....	40	6,436	12.827	67 020	.....	87,104	753	1	.....	754
1915	.....	.....	.....	.....	703	.....	.....	44	5,352	12.030	68.548	.....	86,677	212	4	.....	216
1916	.....	.....	.....	.....	656	.....	.....	51	6.587	8.945	65 817	.....	82.056	404	8	.....	412
1917	.....	.....	.....	[J]	642	.....	.....	41	6,228	3.721	63,072	.....	73,704	943	9	.....	952
1918	.....	.....	.....	363	270	.....	.....	35	6,032	8 730	27.168	.....	42,598	1,935	7	.....	1,942
1919	.....	48	2	334	265	.....	.....	35	6,096	6,618	31 752	.....	45,150	1,517	5	.....	1,522
1920	.....	69	3	356	246	.....	.....	35	5,607	7.435	25.430	.....	39,181	1,042	4	.....	1,046
1921	.....	94	3	389	274	.....	.....	32	5,167	8.368	28,968	.....	43,295	1.255	3	.....	1,258
1922	.....	120	1	496	319	.....	.....	31	5,227	9,843	35,692	.....	51,729	1.188	9	.....	1,197
1923	.....	74	1	494	346	.....	.....	34	5,402	10.867	39,147	.....	56,365	1,054	9	.....	1,063
1924	.....	76	2	497	406	.....	.....	39	5,657	13.369	45.355	.....	65,401	1,122	11	.....	1,133
1925	.....	158	3	459	541	.....	.....	61	5,960	16,650	52,448	.....	76,280	1.226	12	.....	1,238
1926	.....	150	2	478	653	.....	.....	41	5,844	23.314	64.311	.....	94,793	1,188	9	.....	1,197
1927	.....	112	2	504	663	.....	.....	47	5,342	26,368	77.018	.....	110,056	1.267	8	.....	1,275
1928	.....	94	1	512	630	.....	.....	46	5,492	30,773	[G]84.745	.....	122,293	1.842	8	.....	1,850
1929	.....	93	.....	535	704	.....	.....	45	4,988	34.758	[G]99 507	.....	140,630	1,868	20	.....	1,888
1930	.....	157	D	523	1,182	.....	.....	59	4,904	41,624	[G]125,555	.....	174,004	1,996	16	.....	2,012
1931	.....	134	[F]	520	1,606	.....	.....	124	4.662	49.127	162.842	.....	219,015	2,038	[F]	.....	2,038
1932	.....	126	[F]	530	1,608	.....	.....	208	4,116	53,815	154,367	.....	214,770	1,895	[F]	.....	1,895
1933	11	122	[F]	562	1,665	.....	.....	204	4,072	54,020	154.840	.....	215,496	1,663	[F]	.....	1,663
1934	10	178	[F]	557	2,187	.....	.....	151	3,913	62.063	174,318	.....	243,377	1,546	[F]	.....	1,546
1935	41	133	[F]	541	2,996	44	.....	119	3,812	61,310	182,386	2	251,384	1,301	[F]	4	1,305
1936	273	127	[F]	503	3,115	50	.....	123	3,789	63.659	186,206	1	257,846	1,278	[F]	4	1,282
1937	619	123	[F]	502	3,176	221	16	110	3,716	52.452	193,241	4	254,180	1,196	[F]	22	1,218
1938	752	130	[F]	513	3,861	383	318	101	3,763	48,487	204,956	9	263,273	1,581	[F]	27	1,608
1939	934	120	[F]	500	4,487	693	1,054	91	3,898	45.932	212,500	10	270,219	4,666	[F]	27	4,693
1940	1,659	119	[F]	496	4,544	719	1,755	57	3,891	43,231	212 909	10	269,390	6,053	[F]	27	6,080
1941[H]	1,380	109	[F]	479	4,447	693	2,474	46	3,319	35,998	226,343	9	275,297	7,659	[F]	26	7,685
Total	5,679	2,666	20	11,643	54,804	2,803	5,617	2,813	266,114	951,489	4,621,675	45	5,925,368	52,021	143	137	52,301

[A] Included in India, British, prior to 1935. [B] Includes fields in Russian Asia other than Sakhalin. [C] Exclusive of U.S.S.R. fields in Asia, other than Sakhalin, which are included with U.S.S.R. in Europe. [D] Less than 1,000 barrels. [E] Approximate production. [F] No more data available. [G] Year ended September 30. [H] For 1941, figures are preliminary, having been estimated by The Oil Weekly. [I] Beginning of production in Brunei. [J] Production of France in previous years credited to Germany.

World Crude Oil Production, by Countries, by Years

(Complete production history of world, in thousands of barrels of 42 U. S. Gallons. Sources: *Mineral Resources* and *Minerals Yearbook*, except as otherwise indicated.)

	NORTH AMERICA						SOUTH AMERICA							
YEAR...	Canada	Mexico	Trinidad	United States	Other North America	Total North America	Argentina	Bolivia	Colombia	Ecuador	Peru	Venezuela	Other South America	Total South America
1857														
1858														
1859				2		2								
1860				500		500								
1861				2,114		2,114								
1862	12			3,057		3,069								
1863	83			2,611		2,694								
1864	90			2,116		2,206								
1865	110			2,498		2,608								
1866	175			3,598		3,773								
1867	190			3,347		3,537								
1868	200			3,646		3,846								
1869	220			4,215		4,435								
1870	250			5,261		5,511								
1871	270			5,205		5,475								
1872	308			6,293		6,601								
1873	365			9,894		10,259								
1874	169			10,927		11,096								
1875	220			8,788		9,008								
1876	312			9,133		9,445								
1877	312			13,350		13,662								
1878	312			15,397		15,709								
1879	575			19,914		20,489								
1880	350			26,286		26,636								
1881	275			27,661		27,936								
1882	275			30,350		30,625								
1883	250			23,450		23,700								
1884	250			24,218		24,468								
1885	250			21,859		22,109								
1886	584			28,065		28,649								
1887	526			28,283		28,809								
1888	695			27,612		28,307								
1889	705			35,164		35,869								
1890	795			45,824		46,619								
1891	755			54,293		55,048								
1892	780			50,515		51,295								
1893	798			48,431		49,229								
1894	829			49,344		50,173								
1895	726			52,892		53,618								
1896	727			60,960		61,687					47			47
1897	710			60,476		61,186					71			71
1898	758			55,364		56,122					71			71
1899	808			57,071		57,879					89			89
1900	913			63,621		64,534					274			274
1901	757	10		69,389		70,156					275			275
1902	531	40		88,767		89,338					287			287
1903	487	75		100,461		101,023					278			278
1904	553	126		117,081		117,760					290			290
1905	634	251		134,717		135,602					373			373
1906	569	502		126,494		127,565					531			531
1907	789	1,005		166,095		167,889	[D]				751			751
1908	528	3,933	[D]	178,527		182,988	12				945			957
1909	421	2,714	57	183,171		186,363	18				1,411			1,429
1910	316	3,634	143	209,557		213,650	20				1,258			1,278
1911	291	12,553	285	220,449		233,578	13				1,465			1,478
1912	243	16,558	437	222,935		240,173	47				1,752			1,799
1913	228	25,696	504	248,446		274,874	131				2,071			2,202
1914	215	26,235	644	265,763		292,857	276				1,837			2,113
1915	215	32,911	750	281,104		314,980	513				2,579			3,092
1916	198	40,546	929	300,767		342,440	867				2,593			3,460
1917	214	55,293	1,602	335,316		392,425	1,218			57	2,577	120		3,972
1918	305	63,828	2,082	355,928		422,143	1,353			[E]60	2,527	333		4,273
1919	241	87,073	1,841	378,367		467,522	1,331			[E]60	2,628	425		4,444
1920	196	157,069	2,083	442,929		602,277	1,651			[E]60	2,817	457		4,985
1921	188	193,398	2,354	472,183		668,123	2,036		67	[E]60	3,699	1,433		7,295
1922	179	182,278	2,445	557,531		742,433	2,866		323	[E]60	5,314	2,201		10,764
1923	170	149,585	3,051	732,407		885,213	3,400		425	87	5,699	4,201		13,812
1924	161	139,678	4,057	713,940		857,836	4,639		445	[E]100	8,379	9,042		22,605
1925	332	115,515	4,387	763,743		883,977	6,336		1,007	160	9,232	19,687		36,422
1926	364	90,421	4,971	770,874		866,630	7,851		6,444	214	10,762	36,911		62,182
1927	477	64,121	5,380	901,129		971,107	8,630		15,014	537	10,127	63,134		97,442
1928	624	50,151	7,684	901,474		959,933	9,070		19,897	1,084	12,006	105,749		147,806
1929	1,117	44,688	8,716	1,007,323		1,061,844	9,391	[D]	20,385	1,381	13,422	137,472		182,051
1930	1,522	39,530	9,419	898,011		948,482	9,002	56	20,346	1,553	12,449	136,669		180,075
1931	1,543	33,039	9,744	851,081		895,407	11,709	25	18,237	1,762	10,089	116,613		158,435
1932	1,044	32,805	10,126	785,159		829,134	13,139	44	16,414	1,597	9,899	116,541		157,634
1933	1,145	34,001	9,561	905,656	23	950,386	13,691	112	13,158	1,620	13,257	117,720		159,558
1934	1,417	38,172	10,894	908,065	28	958,576	14,024	159	17,341	1,637	16,314	136,103		185,578
1935	1,447	40,241	11,671	996,596	47	1,050,002	14,297	164	17,598	1,732	17,067	148,254		199,112
1936	1,500	41,028	13,237	1,099,687	62	1,155,514	15,458	105	18,756	1,942	17,593	154,794		208,648
1937	2,944	46,690	15,503	1,279,160	33	1,344,330	16,355	122	20,599	2,161	17,457	186,230		242,924
1938	6,966	38,279	17,737	1,214,355	78	1,277,415	17,076	226	21,582	2,246	15,839	188,174		245,143
1939	7,838	42,779	19,270	1,264,962	112	1,334,961	18,613	215	22,037	2,313	13,508	205,784		262,470
1940	8,905	44,064	20,219	1,353,214	114	1,426,566	20,486	110	26,067	2,349	13,427	184,761		247,200
1941[H]	9,929	34,620	21,213	1,403,784	113	1,469,659	21,639	121	24,313	1,505	12,845	222,901		283,324
Total	74,725	2,025,135	222,996	25,210,202	610	27,533,668	247,158	1,459	300,455	26,337	278,181	2,295,709		3,149,299

[A] Included in India, British, prior to 1935. [B] Includes fields in Russian Asia other than Sakhalin. [C] Exclusive of U.S.S.R. fields in Asia, other than Sakhalin, which are included with U.S.S.R. in Europe. [D] Less than 1,000 barrels. [E] Approximate production. [F] No more data available. [G] Year ended September 30. [H] For 1941, figures are preliminary, having been estimated by The Oil Weekly. [I] Beginning of production in Brunei. [J] Production of France in previous years credited to Germany.

(Continued on Next Page)

World Crude Oil Production, by Countries, by Years

(Complete production history of world, in thousands of barrels of 42 U. S. Gallons. Sources: *Mineral Resources* and *Minerals Yearbook*, except as otherwise indicated.)

YEAR	ASIA												Australia and New Zealand	World Undistributed	World Total	Percent Prod. by U.S.
	Bahrein Island	[A]Burma	India, British	Iran (Persia)	Iraq	Japan (Incl. Taiwan)	Netherland India	Sakhalin	Br. Borneo (Sarawak & Brunei)	Saudi Arabia	Other Asia	[C]Total Asia				
1857															2	....
1858															4	....
1859															6	31
1860															509	98
1861															2,131	99
1862															3,092	99
1863															2,763	94
1864															2,304	92
1865															2,716	92
1866															3,899	92
1867															3,709	90
1868															3,990	91
1869															4,696	90
1870															5,799	91
1871															5,730	91
1872															6,877	92
1873															10,838	91
1874															11,933	92
1875						5						5			9,977	88
1876						7						7			11,051	83
1877						10						10			15,754	85
1878						18						18			18,417	84
1879						23						23			23,601	84
1880						26						26			30,018	88
1881						17						17			31,993	86
1882						15						15			35,704	85
1883						20						20			30,255	78
1884						28						28			35,969	67
1885						30						30			36,765	59
1886						38						38			47,243	59
1887						29						29			47,807	59
1888						37						37			52,165	53
1889			94			53						147			61,507	57
1890			118			52						170			76,633	60
1891			190			53						243			91,100	60
1892			242			69						311			88,739	57
1893			299			106	600					1,005			92,038	53
1894			327			173	688					1,188			89,337	55
1895			372			170	1,216					1,758			103,692	51
1896			430			237	1,427					2,094			114,199	53
1897			546			262	2,552					3,360			121,993	50
1898			542			319	2,964					3,825			124,979	44
1899			941			539	1,796					3,276			131,147	44
1900			1,079			871	2,253					4,203			149,137	43
1901			1,431			1,117	4,014					6,562		20	167,440	41
1902			1,617			996	2,430					5,043		26	181,809	49
1903			2,510			1,209	5,770					9,489		36	194,879	52
1904			3,385			1,219	6,508					11,112		40	217,948	54
1905			4,137			1,347	7,850					13,334		30	215,091	63
1906			4,016			1,564	8,181					13,761		30	213,263	59
1907			4,344			1,718	9,983					16,045		30	263,957	63
1908			5,047			1,871	10,283					17,201		30	285,287	63
1909			6,677			1,887	11,042					19,606		20	298,709	61
1910			6,138			1,829	11,031					18,998		20	327,763	64
1911			6,451			1,737	12,173					20,361		20	344,361	64
1912			7,117			1,659	10,846					19,622		20	352,443	63
1913			7,930	1,857		1,940	11,172		141			23,040		20	385,345	64
1914			7,410	2,910		2,636	11,422		318			24,696		20	407,544	65
1915			8,202	3,616		2,928	11,920		392			27,058		10	432,033	65
1916			8,491	4,477		2,963	12,547		629			29,107		25	457,500	66
1917			8,079	7,147		2,861	13,180		542			31,809		29	502,891	67
1918			8,188	8,623		2,441	12,778		504			32,534		25	503,515	71
1919			8,736	10,139		2,238	15,508		596			37,217		20	555,875	68
1920			8,375	12,230		2,221	17,529		1,020			41,375		20	688,884	64
1921			8,734	16,673		2,233	16,958	2	1,411			46,011		20	766,002	62
1922			8,529	22,247		2,055	17,066	7	2,849			52,753		22	858,898	65
1923			8,406	25,230		1,804	19,870	9	3,940			59,259		24	1,015,736	72
1924			8,416	32,373		1,814	20,473	80	4,163			67,319		24	1,014,318	70
1925			8,274	35,038		1,915	21,422	87	4,257			70,993		23	1,068,933	71
1926			8,011	35,842		1,785	21,243	181	4,942			72,004		17	1,096,823	70
1927			8,032	39,688	338	1,789	27,459	440	4,943			82,689		13	1,262,582	71
1928			8,741	43,461	713	1,944	32,118	677	[H]5,223			92,877		15	1,324,774	68
1929			8,747	42,145	798	2,023	39,279	[G]1,134	5,290			99,416		38	1,485,867	68
1930			8,292	45,828	913	1,950	41,729	[G]1,805	4,907			105,424		40	1,410,037	64
1931			8,200	44,376	830	2,050	35,539	2,734	3,854			97,583		54	1,372,532	62
1932			8,817	49,471	836	1,630	39,001	2,631	3,796			106,182		62	1,309,677	60
1933	31		8,743	54,392	917	1,455	42,606	2,338	4,490			114,972		71	1,442,146	63
1934	285		10,503	57,851	7,689	1,834	46,925	2,881	5,140			133,108		96	1,522,281	60
1935	1,265	7,181	2,038	57,273	27,408	2,249	47,171	2,545	5,546			152,676	5	4	1,654,488	60
1936	4,645	7,588	1,978	62,718	30,406	2,440	50,025	3,212	5,209	20		168,241	5	4	1,791,540	61
1937	7,762	7,848	2,162	77,804	31,836	2,488	56,724	3,656	6,009	65		196,354	4	4	2,039,014	63
1938	8,298	7,538	2,488	78,372	32,643	2,511	57,318	[H]3,821	6,913	495		200,397	4	4	1,987,844	61
1939	7,589	7,873	2,327	78,151	30,791	2,654	62,087	[H]4,000	7,097	3,934		206,503	3	4	2,078,853	61
1940	7,074	7,979	2,250	78,592	25,725	2,639	60,830	[H]4,000	7,047	5,365		201,501	4	4	2,150,745	63
1941[H]	7,002	7,839	2,267	78,035	9,900	2,657	61,975	[H]5,000	6,871	5,872		187,418	4	4	2,223,391	63
Total	43,951	53,846	259,416	1,106,559	201,743	85,507	1,037,481	41,240	108,039	15,751		2,953,533	29	1,038	39,615,236	64

[A] Included in India, British, prior to 1935. [B] Includes fields in Russian Asia other than Sakhalin. [C] Exclusive of U.S.S.R. fields in Asia, other than Sakhalin, which are included with U.S.S.R. in Europe. [D] Less than 1,000 barrels. [E] Approximate production. [F] No more data available. [G] Year ended September 30. [H] For 1941, figures are preliminary, having been estimated by The Oil Weekly. [I] Beginning of production in Brunei. [J] Production of France in previous years credited to Germany.

Stocks Are Smaller

Crude and refined storage revealed close to minimum requirements with demand accelerated by war effort

STOCKS of crude and refined oils appear to be very close to minimum requirements, and in some instances, inventories are smaller than desirable, as the industry faces the responsibility of supplying the petroleum products that will be needed by the nation for its participation in a far-flung war.

The comparatively light inventories are particularly significant because they exist in the face of record-breaking production and processing of crude. The stocks are reacting only normally, despite the fact that refineries are being operated around 90 percent of rated capacity, while in the opinion of some students of the industry's affairs, all but comparatively few wells are being produced at capacity or else at rates close to the limits beyond which they could not go without damage or sacrifice of ultimate recovery.

Detailed examination of the storage situation brings into prominence, furthermore, several instances of exceptionally light stocks in relation to current and prospective demand. It is found, for example, that there are scarcities or threats of scarcities particularly of lubricants, heavy fuel oils, and natural gasoline, as well as aviation gasoline. All these products except aviation gasoline are held in smaller quantities than a year ago, whereas they are being used in materially larger volumes; and while there are more barrels of aviation gasoline in storage now than a year ago, there are substantially fewer days' supply on hand, as demand has greatly increased.

Stocks of all oils in the United States totaled approximately 553,415,000 barrels on December 31, 1941, it is indicated. That amount was only 10,500,000 barrels (2 percent) less than the reported total of 563,954,000 barrels for December 31, 1940. But demand for petroleum having increased sharply meanwhile, the present stocks are 10 percent smaller than those held a year ago, in terms of days' supply. The stocks of the end of 1941 represented only 128 days' supply, on the basis of daily average requirements during 1941, whereas the end-of-1940 stocks had been equivalent to 142 days' supply at the rate of demand during 1940.

Crude Stocks Down

The reduction of stocks of all oils has reflected particularly a material withdrawal of crude from storage, which occurred despite record-breaking production for the year. Refinable crude in storage in the United States on December 27, 1941, totaled 243,990,000 barrels, which was 20,000,000 barrels (7.6 percent) less than the 264,079,000 barrels in the tanks December 31, 1940.

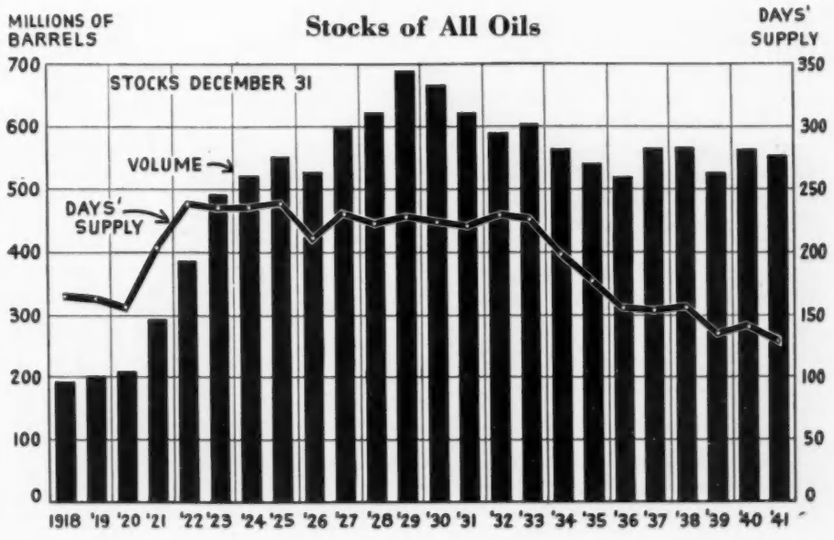
The decrease in crude stocks from a year ago has been considerably greater on the basis of days' supply than in actual barrels. On the basis of indicated daily average requirements for January, the stocks on hand at the close of 1941 represented only 57 days' supply, whereas those of the end of 1940 were equivalent to 72 days' supply. These figures indicate a decrease of 15 days' supply or 20.8 percent in available storage crude since a year ago.

Heavy crude oil in California, not refinable and used as heavy fuel oil, likewise has been taken from storage, and stocks of 9,925,000 barrels on December 27, 1941, were approximately 2,000,000 barrels (16.6 percent) less than those of 11,906,000 barrels reported for December 31, 1940.

Natural gasoline stocks now are undesirably low, as refiners have been using all available supplies, from current production and from inventory, in blending with refined gasolines in their attempts to meet the heavy demands for aviation gasoline and high-octane automotive gasoline, the natural furnishing needed volatility and other qualities in manufacture of the premium motor fuels. Evidence of the scarcity of natural gasoline is furnished in tight markets and relatively high prices as well as in the statistics on stocks.

Refined Products

In actual volume, the stocks of all refined products are nearly 5 percent larger than a year ago, having totaled approximately 295,500,000 barrels on December 31,



Stocks of Crude Oil and Refined Products

Estimates December 31, 1941 (Bureau of Mines and A.P.I.)

(Barrels)

ITEM	Dec. 31, 1940 (Bureau of Mines)	Dec. 31, 1941 (Estimated)	Change During Year	
			Barrels	Percent
All Oils:				
Amount on Hand	563,954,000	553,415,000	—10,539,000	— 1.9
Days' Supply on Basis of Daily Average Demand During Year	142	128	—14	— 9.8
SUMMARY OF PRINCIPAL ITEMS:				
Crude Petroleum:				
Amount of Refinable in United States	264,079,000	243,990,000*	—20,089,000	— 7.6
Days' Supply of Refinable in U. S., on Basis of Indicated Daily Average Demand in January, 1942	72	57	—15	— 20.8
Heavy in California	11,906,000	9,925,000*	—1,981,000	— 16.6
Natural Gasoline	5,704,000	4,000,000	—1,704,000	— 29.8
Refined Products:				
Total Amount, All Products	282,265,000	295,500,000	+ 13,235,000	+ 4.7
Days' Supply, on Basis of Daily Average Demand for all Oils During Year	71	68	—3	— 4.2
STOCKS OF FINISHED PRODUCTS, ITEMIZED:				
Gasoline:				
Finished	77,943,000	84,600,000	+ 6,657,000	+ 8.5
Unfinished	6,466,000	7,900,000	+ 1,434,000	+ 22.1
Total	84,409,000	92,500,000	+ 8,091,000	+ 9.6
Days' Supply of Motor Fuel (Finished Gasoline and Natural Gasoline), on Basis of Daily Average Demand During Year	50	47	—3	— 6.0
Aviation Gasoline (Included Above with Gasoline):				
Amount	6,285,000	7,500,000	+ 1,215,000	+ 19.3
Days' Supply, on Basis of Daily Average Demand During Year	202	160	—42	— 20.8
Gas Oil and Distillate Fuel:				
Amount	42,940,000	50,500,000	+ 7,560,000	+ 17.6
Days' Supply, on Basis of Daily Average Demand During Year	87	94	+7	+ 8.0
Residual Fuel Oil:				
Amount	89,304,000	86,000,000	— 3,304,000	— 3.7
Days' Supply, on Basis of Daily Average Demand During Year	92	77	—15	— 16.3
Kerosene:				
Amount	9,512,000	10,200,000	+ 688,000	+ 7.2
Days' Supply, on Basis of Daily Average Demand During Year	48	50	+2	+ 4.2
Lubricating Oil:				
Amount	8,767,000	7,800,000	— 967,000	— 11.0
Days' Supply, on Basis of Daily Average Demand During Year	91	68	—23	— 25.3
Other Refined Products	47,333,000	48,500,000	+ 1,167,000	+ 2.5

* Stocks reported by Bureau of Mines as of December 27, 1941.

1941, compared with 282,265,000 barrels on December 31, 1940, an increase of 13,235,000 barrels.

In terms of days' supply at prevailing rates of demand, however, refined product stocks are smaller now than a year ago. The stocks on hand at the end of 1941 were equivalent to only 68 days' supply at the daily average rate of demand for all oils during 1941, whereas the inventory held at the close of 1940 was equivalent to 71 days' supply at the rate of demand that year. The past year brought, therefore, a decrease of aggregate refined oil stocks in the amount of 3 days' supply, or 4 percent, despite the 13,000,000-barrel increase in actual volume.

Gasoline Stocks

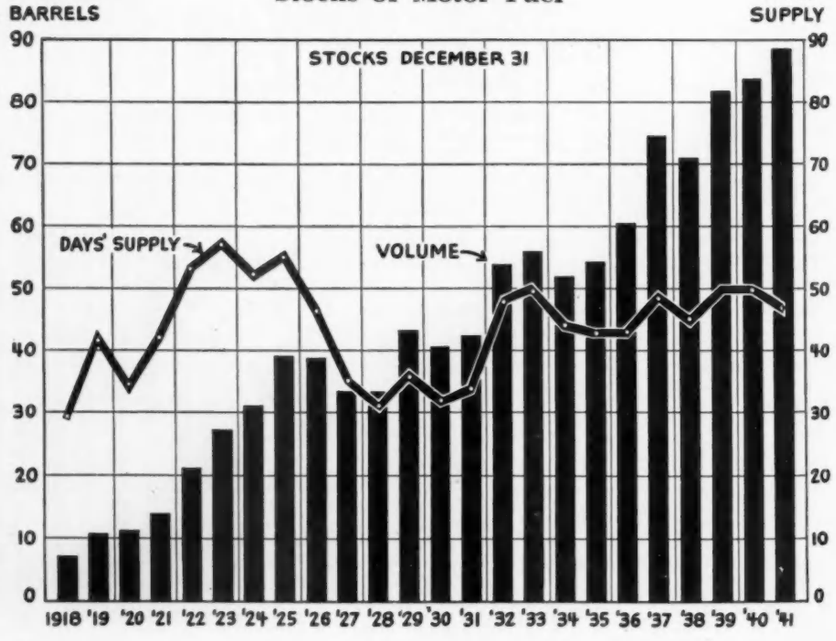
As in the case of refined products in the aggregate, gasoline is held in larger quantity than a year ago, but present storage represents fewer days' supply than did the stocks at the close of 1940.

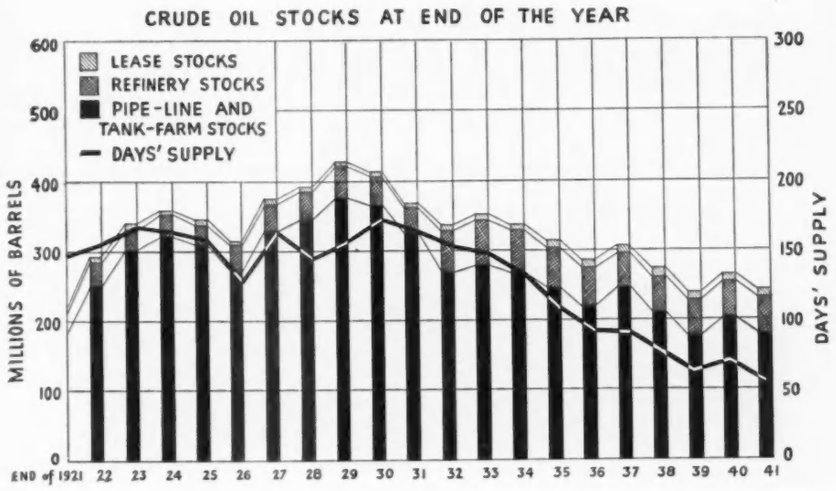
Finished and unfinished gasoline in storage on December 31, 1941, totaled approximately 92,500,000 barrels, compared with 84,409,000 barrels on December 31, 1940, an increase of a little over 8,000,000 barrels or 9.6 percent.

Stocks of motor fuel, including finished gasoline and natural gasoline, were up to about 88,600,000 barrels on December 31, 1941, from 83,647,000 a year previously, an increase of 5,000,000 barrels or 6 percent in actual volume; but the new total represented only 47 days' supply, compared with 50, on the basis of the higher daily average demand for 1941, a decrease of 3 days' supply, or 6 percent.

Aviation Gasoline

In reflection of war time expansion of United States capacity to produce aviation gasoline, output has been stepped up sufficiently to satisfy current domestic and export demands and in addition to permit some increase in stocks, as regards actual volume, although present storage is relatively lighter than that of a year ago, considering the sharply higher current needs. Stocks on December 31, 1941, totaled about 7,500,000 barrels, it is indicated, compared with 6,285,000 barrels a year earlier, an increase of 1,215,000 barrels or 19.3 percent. However, demand being much greater, present stocks





represent only 160 days' supply on the basis of daily average requirements in 1941, whereas those of a year ago were equivalent to 202 days' supply. During 1942, there is to be expected a continuance of a tightness of supplies of this product, despite plans to quadruple manufacturing capacity by the end of the year or mid-1943, as war requirements will continue to absorb all the material available, with aircraft production rapidly expanding.

Lubricant Stocks Down

Stocks of lubricating oil were reduced approximately a million barrels (11 percent) during the past year, having come down to about 7,800,000 barrels as of December 31, 1941, from 8,767,000 a year earlier. In terms of days' supply, the reduction was larger than in terms of barrels, as storage at the close of 1941 was equivalent to only 68 days' requirements at the daily average rate of demand during the year, whereas stocks a year earlier had represented 91 days' supply. The year brought, therefore, a reduction of stocks in the amount of 23 days' supply, or 25 percent.

Despite indicated curtailment of the use of automobiles, there will be continued large domestic consumption of lubricants in the United States, with industrial use larger; and substantially increased exports are in prospect, for supplying war needs of the country's allies. Consequently, some difficulty may be experienced in maintaining adequate stocks.

Heavy Fuel Oils

The nation will need large quantities of heavy fuel oil during the war, for naval and merchant-marine operations, for heavy railroad traffic, for mines, smelters, and factories, for production of electricity, and for fuel uses of the oil industry. Consequently, the present relative scarcity of residual fuel oil will continue and perhaps be accentuated, especially inasmuch as refiners have no inducement price-wise for turning out any more of this residue product than necessary.

Stocks on hand December 31, 1941, totaled about 86,000,000 barrels, having been 3,304,000 barrels (3.7 percent) lower than a year earlier, and the inventory represented only 77 days' supply at the daily average rate of demand during 1941, whereas stocks at the end of 1940 were equivalent to 92 days' supply, indicating a decrease within the past year of 15 days' supply, or 16.3 percent.

The reduction in stocks of residual fuel oil during the past year was accounted for almost wholly by California. That state had only 53,072,000 barrels in storage on October 31, 1941, the Bureau of Mines reported, against 59,892,000 on December 31, 1940. Outside California, stocks currently are larger than a year ago, in actual volume.

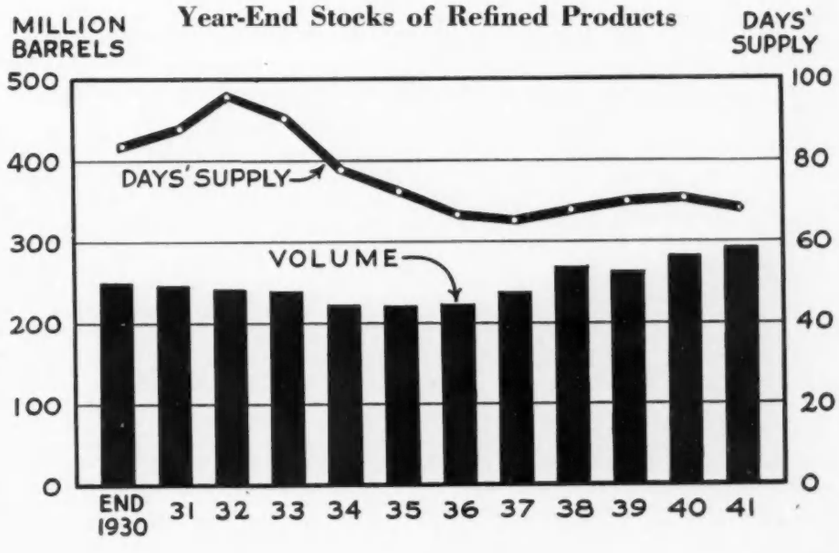
Heating Oil and Kerosine

Stocks of light fuel oil and kerosine are relatively more ample now than those of other major products, as less severe weather than normally has held down consumption this winter, following special efforts of the industry to build up a large inventory to take care of possible heavy requirements.

Gas oil and distillate fuel, consisting in large part of heating oil, was held in storage in the amount of about 50,500,000 barrels on December 31, 1941. That was 7,560,000 barrels more than the 42,940,000 reported for the end of December a year previously, an increase of 17.6 percent in the volume on hand. However, the year-to-year increase in stocks was only 8 percent in terms of days' supply, the inventory of the close of 1941 having been equivalent to 94 days' requirements on the basis of daily average demand during the year, whereas that of the end of 1940 represented 87 days' needs.

Stocks of kerosine in the United States on December 31, 1941, amounted to about 10,200,000 barrels and were 688,000 barrels (7.2 percent) above those of 9,512,000 barrels held a year before. The new total was equivalent to 50 days' supply at the daily average rate of demand in 1941, whereas the stocks of a year previously had represented 48 days' supply.

Year-End Stocks of Refined Products



U. S. Crude Reserves Rise

Nation again finds more oil than it produces, so known unproduced volume hits peak, but gain smallest in years

DESPITE the production of a record volume of oil, the quantity of discovered but unproduced crude oil in the United States rose to another new peak during 1941, as the nation continued to maintain its consistent trend of finding more oil than it produced. As a result of discovering an estimated 1,903,344,000 barrels of new oil during the year in contrast with the production of 1,403,784,000 barrels, known crude reserves increased by 499,560,000 barrels and therefore as of January 1, 1942 totaled 19,524,075,000 barrels in comparison with 19,024,515,000 barrels a year ago.

While sufficient to offset production and therefore establish a new peak crude reserve volume, the year was not highly satisfactory from a discovery standpoint and no doubt will cause concern as to the industry's ability to continue to maintain its reserve position in the face of sharply rising consumption. The additions made to reserves were the smallest since 1935. Although the volume of oil found in 1941 was minutely greater than in 1940, production rose more sharply and consequently, net additions to discovered unproduced supplies were 52,000,000 barrels less than in the preceding year. Furthermore, the volume of oil found for the second consecutive year was materially beneath the discovery experience that marked the industry's course in 1939, 1938 and 1937.

The decline in discovery rates may be passed off as not too alarming as long as more oil is found than produced, and by saying that 1939, 1938 and 1937 represented abnormally high finding experience, or that the industry knows yearly variations of considerable magnitude are certain when seeking anything as hidden as petroleum. However, little explanation can be given for the decline in the ratio of oil found per dry hole drilled, which is considered by many authorities as a good index of the efficiency of prospecting efforts. The number of dry holes drilled last year rose to 7147, or 377 more than in 1940, but the quantity found was not in keeping with the additional exploratory work—for the amount of oil found per dry hole declined 11,354 barrels to 266,313 barrels. This is the lowest amount discovered in any year since 1935, since which time annual production has risen over 400 million barrels.

The increase in crude reserves made during 1941 was due almost entirely to additions made in the Southwestern group of states, where known unproduced supplies increased 628,874,000 barrels to 13,506,450,000 barrels, which was sufficient to offset substantial

United States Crude Reserve Trend by States for Past Six Years

	January 1, 1937	Percent	January 1, 1938	Percent	January 1, 1939	Percent	January 1, 1940	Percent	January 1, 1941	Percent	January 1, 1942	Percent
West Coast:												
California	2,956,000,000	22.6	3,063,142,000	19.7	3,188,763,000	18.4	3,532,342,000	19.1	3,291,382,000	17.3	3,226,000,000	16.5
	2,956,000,000	22.6	3,063,142,000	19.7	3,188,763,000	18.4	3,532,342,000	19.1	3,291,382,000	17.3	3,226,000,000	16.5
Rocky Mountain:												
Wyoming	239,000,000	1.9	265,922,000	1.7	261,133,000	1.5	305,616,000	1.6	304,821,000	1.6	290,000,000	1.5
Montana	92,000,000	0.7	109,378,000	0.7	104,471,000	0.6	93,460,000	0.5	89,443,000	0.5	89,000,000	0.5
Colorado	15,000,000	0.1	19,125,000	0.1	17,713,000	0.1	20,162,000	0.1	23,223,000	0.1	22,000,000	0.1
	346,000,000	2.7	394,425,000	2.5	383,317,000	2.2	419,238,000	2.2	417,487,000	2.2	401,000,000	2.1
N. Mid-Continent:												
Kansas	568,000,000	4.3	601,317,000	3.9	613,230,000	3.5	725,467,000	3.9	692,270,000	3.6	687,000,000	3.5
Nebraska							50,000	0.0	3,749,000	0.0	4,750,000	0.0
Oklahoma	1,141,000,000	8.8	1,212,252,000	7.8	1,162,370,000	6.7	1,063,152,000	5.7	1,001,909,000	5.3	952,000,000	4.9
	1,709,000,000	13.1	1,813,569,000	11.7	1,775,600,000	10.2	1,788,669,000	9.6	1,697,928,000	8.9	1,643,750,000	8.4
Southwest:												
Arkansas	84,000,000	0.6	192,101,000	1.2	188,246,000	1.1	320,148,000	1.7	306,218,000	1.6	347,500,000	1.8
Louisiana	524,000,000	4.0	713,434,000	4.6	1,040,256,000	6.0	1,173,225,000	6.3	1,215,459,000	6.4	1,317,500,000	6.7
Texas	6,422,000,000	49.2	8,247,928,000	53.2	9,447,764,000	54.5	9,768,371,000	53.0	10,623,516,000	55.8	11,123,875,000	57.0
Mississippi							6,642,000	0.0	40,242,000	0.2	30,000,000	0.2
New Mexico	471,000,000	3.6	546,587,000	3.6	703,252,000	4.1	687,168,000	3.7	692,141,000	3.6	687,575,000	3.5
	7,501,000,000	57.4	9,700,050,000	62.6	11,379,518,000	65.7	11,955,554,000	64.7	12,877,576,000	67.6	13,506,450,000	69.1
North Central:												
Illinois	28,000,000	0.2	40,884,000	0.3	242,847,000	1.4	381,636,000	2.1	315,305,000	1.7	327,500,000	1.7
Indiana	3,000,000	0.0	2,622,000	0.1	6,031,000	0.0	14,164,000	0.0	13,703,000	0.1	12,500,000	0.0
Kentucky	39,000,000	0.3	38,366,000	0.2	37,545,000	0.2	44,086,000	0.2	40,999,000	0.2	37,500,000	0.2
Michigan	44,000,000	0.3	49,181,000	0.3	42,749,000	0.3	51,078,000	0.3	34,579,000	0.2	36,000,000	0.2
Ohio	32,000,000	0.3	28,456,000	0.2	26,358,000	0.1	31,692,000	0.2	30,284,000	0.2	28,000,000	0.1
	146,000,000	1.1	159,509,000	1.1	355,530,000	2.0	522,656,000	2.8	434,870,000	2.4	441,500,000	2.3
Eastern:												
New York	66,000,000	0.5	60,535,000	0.4	40,490,000	0.3	35,392,000	0.2	65,001,000	0.3	60,000,000	0.3
Pennsylvania	307,000,000	2.3	287,886,000	1.8	200,460,000	1.1	183,123,000	1 0	187,647,000	1 0	190,000,000	1.0
West Virginia	32,000,000	0.3	28,152,000	0.2	24,468,000	0.1	45,888,000	0.2	52,444,000	0.3	55,000,000	0.3
	405,000,000	3.1	376,573,000	2.4	265,418,000	1.5	264,403,000	1.4	305,092,000	1.6	305,000,000	1.6
Miscellaneous*							150,000	0.0	362,000	0.0	375,000	0.0
Total U. S.	13,063,000,000	100.0	15,507,268,000	100.0	17,348,146,000	100.0	18,483,012,000	100.0	19,024,515,000	100.0	19,524,075,000	100.0

* Includes Tennessee, Missouri and Utah.
Figures for January 1, 1942, by The Oil Weekly; all other years by the American Petroleum Institute.

U. S. Experience in Oil Finding Rates

	Oil Discovered		Oil Produced		Excess Oil Found		Accumulated Reserves (End of Period)	Dry Holes Completed		Barrels Found	
	Barrels	Percent	Barrels	Percent	Barrels	Percent		Number	Percent	Per Dry Hole	Per Year
1859-1899	2,000,000,000	4.47	938,983,000	3.7	1,061,017,000	5.4	1,061,017,000	26,128	11.4	76,546	50,000,000
1900-1904	1,750,000,000	3.9	439,319,000	1.7	1,310,681,000	6.7	2,371,698,000	17,863	7.8	97,967	350,000,000
1905-1909	1,500,000,000	3.4	789,005,000	3.1	710,995,000	3.6	3,082,693,000	17,567	7.7	85,387	300,000,000
1910-1914	2,000,000,000	4.5	1,167,150,000	4.6	832,850,000	4.3	3,915,543,000	16,064	7.0	124,501	400,000,000
1915-1919	2,000,000,000	4.5	1,651,481,000	6.6	348,519,000	1.8	4,264,062,000	23,470	10.3	85,215	400,000,000
1920-1924	4,000,000,000	9.0	2,919,990,000	11.6	1,080,010,000	5.5	5,344,072,000	28,222	12.3	141,733	800,000,000
1925-1929	6,750,000,000	15.1	4,344,543,000	17.2	2,405,457,000	12.3	7,749,529,000	34,757	15.2	194,205	1,350,000,000
1930-1934	8,775,500,000	19.6	4,347,970,000	17.3	4,427,530,000	22.7	12,177,059,000	20,279	8.9	432,738	1,755,100,000
1935	1,319,537,000	2.9	996,596,000	3.9	322,941,000	1.7	12,500,000,000	5,588	2.4	236,137	1,319,537,000
1936	1,662,690,000	3.7	1,099,690,000	4.4	563,000,000	2.9	13,063,000,000	5,695	2.5	291,956	1,662,690,000
1937	3,723,428,000	8.3	1,279,160,000	5.1	2,444,268,000	12.5	15,507,268,000	6,370	2.8	584,525	3,723,428,000
1938	3,055,233,000	6.8	1,214,355,000	4.8	1,840,878,000	9.4	17,348,146,000	6,133	2.7	498,162	3,055,233,000
1939	2,399,828,000	5.4	1,264,962,000	5.0	1,134,866,000	5.8	18,483,012,000	6,670	2.9	359,688	2,399,828,000
1935-1939	12,160,716,000	27.1	5,854,763,000	23.2	6,305,953,000	32.3	18,483,012,000	30,456	13.3	399,264	2,432,143,200
1940	1,894,717,000	4.2	1,353,214,000	5.4	541,503,000	2.8	19,024,515,000	6,770	3.0	279,667	1,894,717,000
1941	1,903,344,000	4.2	1,403,784,000	5.6	499,560,000	2.6	19,524,075,000	7,147	3.1	266,313	1,903,344,000
Total	44,734,277,000	100.0	25,210,202,000	100.0	19,524,075,000	100.0	19,524,075,000	228,723	100.0	195,582	538,967,192

losses in several other regions. The Southwestern states now have 69.1 percent of total reserves, in contrast with 67.6 percent a year ago and 57.4 percent five years ago.

Texas Leads Again

The majority of the gain in the Southwest goes to the credit of Texas, where prospecting continued very successful. This state discovered 1,007,750,000 barrels of new oil, or in excess of 50 percent of that found in the nation as a whole, and consequently added 500,359,000 barrels to its previous reserves to bring them to 11,123,875,000 barrels on January 1, 1942. Texas now has 57 percent of the United States proven unproduced oil supply.

Louisiana also contributed to the growth in the Southwestern states and that of the nation. Finding of 218,306,000 barrels of new oil exceeded the state's annual production by 102,041,000 barrels, and this addition boosted its reserves to 1,317,500,000 barrels or 6.7 percent of the nation's total.

Arkansas reserves increased 41,282,000 barrels to 347,500,000 barrels. New Mexico and Mississippi had slight decreases in crude reserves as they failed to discover as much oil as they produced.

The only other region to register an increase in reserves was that of North Central United States, where Illinois reserves rose from 315,305,000 to 327,500,000 barrels.

California, Oklahoma and Kansas, other major reserve states, all failed to find as much oil as they produced.

Although the largest decrease in reserves occurred in California, this state was exceeded only by Arkansas insofar as the amount of oil found in ratio to the number of dry holes drilled. The state found 165,019,000 barrels of new oil to rank third among the states in volume discovered, which, however, was 65,382,000 barrels less than its production. But since it was the site of only 184 dry holes, the ratio of barrels discovered to failures amounted to the excellent quantity of 896,842 barrels. Arkansas, with only 72 dry holes, found an average of 937,111 barrels per unsuccessful drilling operation, to top the nation in this respect.

Second largest decline in reserves was in Oklahoma. Apparently sufficient exploratory drilling took place in the state, for 641 dry holes were drilled and 53 new fields were discovered, but only 104,469,000 barrels of new supply were found, and which lacked 49,909,000 barrels of equaling production. On this basis the state found an average of only 162,978 barrels per dry hole.

Details of 1941 Oil Discovery Rates

STATE	Oil Volume Discovered In 1941	Annual Oil Production In 1941	Net Addition or Decrease In Crude Reserves	†Dry Holes Drilled	Barrels Found per Dry Hole Drilled
West Coast:					
California	165,019,000	230,401,000	—65,382,000	184	896,842
Rocky Mountain:					
Wyoming	14,961,000	29,782,000	—14,821,000	20	748,050
Montana	7,094,000	7,537,000	— 443,000	50	141,880
Colorado	628,000	1,851,000	— 1,223,000	9	69,777
	22,683,000	39,170,000	—16,487,000	79	287,127
N. Mid-Continent:					
Kansas	77,957,000	83,045,000	— 5,088,000	598	130,362
Nebraska	2,644,000	1,643,000	+ 1,001,000	44	60,090
Oklahoma	104,469,000	154,378,000	—49,909,000	641	162,978
	185,070,000	239,066,000	—53,996,000	1283	144,247
Southwest:					
Arkansas	67,472,000	26,190,000	+ 41,282,000	72	937,111
Louisiana	218,306,000	116,265,000	+102,041,000	447	488,380
Mississippi	5,157,000	15,399,000	— 10,242,000	42	122,785
Texas	1,007,750,000	507,391,000	+500,359,000	2484	405,696
New Mexico	34,993,000	39,559,000	— 4,566,000	83	421,602
	1,333,678,000	704,804,000	+628,874,000	3128	426,367
North Central:					
Illinois	146,108,000	133,913,000	+ 12,195,000	885	165,093
Indiana	5,468,000	6,671,000	— 1,203,000	215	25,432
Kentucky	1,237,000	4,736,000	— 3,499,000	181	6,281
Michigan	17,722,000	16,301,000	+ 1,421,000	386	45,911
Ohio	1,033,000	3,317,000	— 2,284,000	459	2,250
	171,568,000	164,938,000	+ 6,630,000	2126	80,699
Eastern:					
New York	178,000	5,179,000	— 5,001,000	1	178,000
Pennsylvania	19,095,000	16,742,000	+ 2,353,000	124	153,991
West Virginia	5,977,000	3,421,000	+ 2,556,000	123	48,593
	25,250,000	25,342,000	— 92,000	248	101,814
Miscellaneous*	76,000	63,000	+ 13,000	99	767
Total United States	1,903,344,000	1,403,784,000	+499,560,000	7147	266,313

* Includes Missouri, Tennessee, Utah on reserves, and all other states in dry hole column.
† Includes both new well dry holes and wells deepened that were dry.

Drilling Decline Expected

Priorities and spacing orders presage reductions in wells of 48 percent, in footage of 30 percent

By RAY L. DUDLEY, Publisher
and ELTON STERRETT, Staff Writer

BEFORE Pearl Harbor and the consequent promulgation of oil-field equipment Conservation Order M-68 and the interrelated Preference Rating Order P-98, plans had been drawn and budgets made to drill an estimated 30,511 wells in the United States during 1942, this figure including those for salt-water-disposal, water-drive and other secondary-recovery projects. Anticipated footage, despite the 4 percent drop in estimated wells, would have run 2 percent over the 1941 total.

But since the regulatory orders issued from Washington, and on the basis of restrictions thus set up in spacing, the probable number of wells to be drilled in 1942 is estimated to be 16,830. This indicates a drop of 48 percent in number of anticipated completions, but, due to the development in deeper fields, producing the desired high-octane crude, or tapping gas-distillate sands, the probable footage drilled in 1942 will reach 66,731,000, or 70 percent of the footage in 1941.

Wildcatting

The emphasis placed upon the development of new reserves by Washington will result in the drilling of a higher percentage of wildcats to proven producers than the industry has ever seen. With, as yet, no background of experience upon which to base the probable percentage of exceptions to be granted under the orders for drilling where pattern, spacing and other requirements do not align with the restrictions, it is anticipated that much of the activity early in the year will be in wildcatting. Estimates place the number of wildcats at 6000. Many known prospects, adjacent to or within easy trucking distance of fields which were actively drilled in 1941, undoubtedly will see rig shifts and explorations under way as soon as arrangements can be made. Most of these prospects are already blanketed by leases, and only the securing of permits will be required before actural work is begun.

Wildcatting, in common with normal field development, has been subjected to the consideration of probable type of oil which would be found, demand therefor, and the restrictions of transportation, distance from market and probable military or geographic significance, and figures balanced accordingly.

In California, after being especially active in 1941, the industry prior to M-68 had anticipated a cut of 35 percent for 1942, in view of probable greatly reduced export demand and increased stocks. Shift of much war activity to the Pacific, coming after the original budgets were drawn and company estimates furnished us, upset earlier calculations, and it now appears that the state will see at least as much drilling in 1942 as the industry there had forecast prior to M-68. Desirability of the crude for war purposes and the great geographical advantage of production there undoubtedly will result in a higher percentage of exceptions than will be granted in states less fortunately placed as sources of fuel oil and other Navy needs.

The Eastern States, including the Illinois Basin, anticipating only a slight drop from 1941, find that well spacing, despite closeness of the area to refining facilities and markets and the probable materials restrictions connected with securing pipe for secondary-recovery projects, will effect a reduction in drilling of slightly higher than the national average. Despite the high lubrication value of Pennsylvania-type crudes, it appears probable that secondary-recovery projects not already authorized as such will fail to receive the approval which would entitle them to special consideration, and much of this work will be deferred, with consequent decrease in wells to be drilled for water input.

Michigan, slated by operators for a drop in drilling, even before M-68, should drill a higher percentage of anticipated wells than adjacent states, being aided by the closeness of the fields to the great war industries. Wildcatting is expected to be especially active in this state.

Kansas and Oklahoma, both largely dependent upon pumping for bringing the oil to the surface, and with relatively small areas open to the wildcatting provisions of the new restrictions, face a severe cut in drilling operations over those of 1941. In both states, also, possible effect of transportation bottlenecks in the handling of more than the crude which could be produced economically from existing wells to meet augmented demand is considered as a possible

THESE two widely differing estimates, one showing what the industry deemed desirable to drill in the forthcoming year under normal conditions and the other showing what probably will be drilled under the new regulations in proven fields and for permissible wildcatting, result from dual surveys made by The Oil Weekly.

In making estimates as to 1942 operations, The Oil Weekly followed the same system used in the past. It wrote the 175 largest oil companies and asked them to advise it from their own budget figures what they had planned to drill in 1942. At the same time The Oil Weekly's field staff began an estimate as to the number of wells to be drilled, by fields. While this work was in progress Conservation Order M-68 came out, followed by its revision and Preference Rating Order P-98.

These two orders practically threw into the discard the first estimates made by oil companies and the staff. Operators responsible for about one third of the wells drilled in 1941 replied to the questionnaires, and while all found their plans disrupted by M-68, they were kind enough to tell what they had planned to do, both from a drilling and pumping-equipment standpoint. Our deepest appreciation is expressed to those companies who have helped in this work.

deterrent to the granting of exceptions.

The Rocky Mountain area suffers a probable cut of only a quarter of the wells originally projected for 1942, due to favorable spacing rules already being in effect in some fields, and to the known prospects whose conversion to producing acreage would be of material assistance in reducing the volume of petroleum transported into the region—thus freeing an equivalent portion of railway equipment for use elsewhere.

The Southeastern States, locale of widespread and highly speculative wildcatting during the past years, appear slated to suffer the greatest percentage slump of any of the oil-producing sections of the country. Mississippi, with its best producing area practically drilled up, had anticipated a drastic cut in drilling before M-68, and the failure of any of the attempts in other states of the area to show other than dry holes is expected to act as deterrent on companies normally willing to explore far-flung areas and to lead them, instead, to use available equipment for prospecting on known structures more favorably located geographically with reference to known production.

Decrease in Louisiana

Louisiana, composed of two widely different sections, shows the effect of the new conditions most markedly. In the northern section, with pumping wells, relatively small initial production, close spacing and fields largely drilled up, the drop will be severe and will be confined largely to exploration of known prospects and to the further development of gas-distillate fields and deepening of such areas as North Lisbon. In the southern portion of the state, deep wells, already on a wide spacing due to the cost of drilling, the restrictions of M-68 will have little effect on pattern, and the type of production will favor development further in known areas, as well as foster wildcatting in areas geophysically similar to those already producing. The high percentage of flowing wells in this area, together with relatively high allowables and possibility of sustained production at advanced rates all combine to indicate that the area will drop little from its 1941 level.

Texas, drilling nearly a third of the wells in 1941, is anticipated to furnish a smaller percentage during 1942, an anticipated drop in activity in the East Texas field being in part responsible. This field, completing 513 wells in 1941, saw operations almost entirely under exceptions granted by the Texas Railroad Commission and the further drilling of wells in areas where the spacing was on a basis of a fraction of an acre, rather than the spacing desired and fostered under M-68. Apart from wells already initiated before the December dead line and such salt-water-disposal wells as will be required by the projects already approved and under way, the East Texas field is anticipated to see practically no development during 1942. Further corroboration of this is seen in the fact that nearly all of the wells completed in 1941 as producers were put on the pump, thus requiring additional equipment before the oil could be made available. The field already has wells sufficient to deplete the area, and exceptions probably will be exceedingly difficult to secure.

The remainder of the East Texas area faces lesser diminution of drilling than most areas, due to the

Indicated Wells and Footage to Be Drilled in 1942

STATE OR DISTRICT	1941 Wells Drilled	1942 Wells Probably Permitted Under M-68*	Percent Change	1942 Wells Proposed Before M-68*	1941 Footage Drilled	Prospective 1942 Footage Under M-68* Limitations
Total U. S. A.	32,265	16,830	— 48	30,511	95,745,587	66,731,000
Arkansas	185	83	— 55	150	816,575	366,000
California	1,173	768	— 35	768	6,434,330	4,212,000
Eastern States—Total	12,427	5,888	— 53	12,141	23,995,640	11,145,000
Illinois	3,935	1,592	— 60	3,620	9,197,674	3,720,000
Indiana	546	182	— 67	498	970,386	323,000
Kentucky	335	227	— 32	267	352,311	239,000
Ohio	1,774	852	— 48	1,500	3,294,540	1,582,000
New York	1,119	582	— 48	1,250	1,480,232	770,000
Pennsylvania	3,944	2,065	— 48	4,076	6,693,020	3,504,000
West Virginia	774	388	— 50	930	2,007,477	1,007,000
Kansas	2,217	715	— 68	2,162	6,627,634	2,137,000
Louisiana—Total	1,557	922	— 41	1,250	8,779,971	5,895,000
North Louisiana	702	271	— 61	338	2,080,666	803,000
South Louisiana	855	651	— 24	912	6,699,305	5,093,000
Michigan	885	550	— 38	690	1,997,893	1,241,000
Oklahoma	2,162	780	— 64	2,002	5,807,569	2,095,000
Rocky Mountain Area—Total	808	606	— 25	786	1,735,233	1,638,000
Colorado	21	21	0	21	68,797	72,000
Montana	250	125	— 51	265	534,225	267,000
New Mexico	397	347	— 13	347	1,121,255	979,000
Utah	3	1	— 67	3	10,956	4,000
Wyoming	137	112	— 18	150	386,114	316,000
Southeastern States—Total	228	29	— 87	70	1,029,430	114,000
Alabama	5	1	— 80	5	17,371	4,000
Florida	1	0	—100	0	1,280	0
Georgia	1	0	—100	0	1,501	0
Mississippi	198	20	— 90	40	978,939	99,000
Tennessee	23	8	— 67	25	30,339	11,000
Texas—Total	10,439	6,414	— 39	10,329	37,867,398	24,066,000
East Texas Field	513	121	— 76	422	1,855,516	438,000
Rest of East Texas	603	399	— 34	645	2,748,099	1,823,000
North Texas	2,462	1,317	— 47	2,579	5,340,709	2,856,000
South Texas Area—Total†	2,401	1,839	— 23	2,325	10,254,736	7,827,000
Corpus Christi	1,304	980	— 25	1,235	7,285,587	5,476,000
Laredo	808	653	— 19	810	2,462,684	1,990,000
San Antonio	289	206	— 29	280	506,465	361,000
Texas Gulf Coast	742	541	— 41	757	4,653,178	3,393,000
Texas Panhandle	708	365	— 48	850	2,134,252	1,101,000
West Texas	2,365	1,442	— 39	2,026	9,699,936	5,914,000
West Central Texas	645	390	— 40	725	1,180,972	714,000
Other States§	184	75	— 59	163	267,800	99,000

* Amended Conservation Order M-68 and Preference Rating Order P-98 provide for materials for **drilling and well completion** operations ONLY in the case of "exploratory" wells (those located not less than two miles from nearest production) and wells to be located on uniform 40-acre spacing in the case of oil wells and 640-acre spacing in the case of gas wells. **Specific exceptions must be obtained for all other drilling and completion operations.**

† South Texas Area Total is included in Texas Total.

§ Include Iowa, Missouri, Nebraska.

combination of desirable crudes, presence of gas-distillate fields, and the spacing followed in these latter developments. The area also lists a number of prospects rated by geologists as favorable, although such exploratory drilling as has already been done on them has proven relatively disappointing. These and other known structures probably will be more thoroughly investigated by the augmented wildcatting anticipated for the area.

North Texas, due to spacing followed in known fields, percentage of development already reached in the fields, need of pumping equipment in most instances and pipeline proration due to present peak loads, probably will see a greater reduction in drilling for 1942 than other portions of the state, although not as drastic a cut as adjoining Oklahoma. Wildcatting in the area, with a relatively high percentage of hits for 1941, is expected to account for much of the activity in that area.

South Texas, due to favorable geographical location close to deep water hauls to either theatre of war operations, types of production and relatviely wide areas of favorable terrain yet to be explored, is expected to drill slightly more than 75 percent of the wells completed in 1941. Wildcatting should continue at a high rate, due to closeness to refining and ship-

[*Continued on page 59*]

Who Drills Wells?

Analysis shows small companies drill two thirds of all wells

ALLEGED monopolistic control of the oil business by the larger companies certainly finds no support in the drilling branch of the industry, for small companies, or so-called independents, continue to be responsible for three fourths of all wells completed in the United States.

Statistics compiled on completion data covering the year 1941 show that a group of the larger companies were owners of only 25.5 percent of the 32,265 tests finished, therefore small companies drilled 74.5 percent of all wells. This represents a slight increase over similar statistics covering 1940, when the small companies were credited with drilling 71.8 percent of the total.

However, large companies are more inclined to drill in the deeper areas, for they account for 36.5 percent of the 95,874,474 feet of hole drilled during 1941, although drilling but 25.5 percent of the wells. This was a slight decline from the 38.5 percent of the footage drilled by large companies in the preceding year.

A breakdown of these statistics by principal producing regions reveals some interesting conclusions. The figures show that large companies are more inclined to confine activity to the principal producing regions. In Texas, Illinois, Oklahoma, Kansas, Louisiana and California, which produce 87 percent of the country's crude oil yield, the large companies drill a much greater percentage of the wells and footage than their national average, accounting for 37.5 percent of the wells against 25.5 percent for the nation as a whole, and almost 45 percent of the footage compared with a nation-wide average of 36.5 percent.

The small companies practically dominate the group classified as "others" in the accompanying table, which is composed of the less important producing sectors of the country, having 95 percent of the wells drilled last year. However, the large companies during the past 12 months showed more inclination to drill in these states than in 1940, when small concerns had 99.7 percent of the completions in the small producing territories.

A larger percentage of the wells in Louisiana and California, the nation's two principal deep producing areas, are drilled by the big companies than in any other states, which further bears out the statement that these firms do more of the deep drilling than the shallow drilling. The large companies account for 45 percent of the wells and 52.8 percent of the footage in Louisiana, and 44.5 percent of the wells and 53 percent of the footage in California.

A noteworthy trend during the past year was the decline in big-company operations in Illinois, the percentage of wells drilled in this state by them falling from 51 percent in 1940 to 39.2 for 1941.

Among the six principal producing and drilling states, only in Oklahoma did the big companies drill fewer wells and less footage than their national average, and the margin of difference here is small. Of Oklahoma's 2162 completions, 24.7 percent belonged to the large concerns, which accounted for 33.1 percent of the footage drilled.

Wells and Footage Drilled by Small and Large Operators

STATE	WELLS DRILLED						FOOTAGE DRILLED					
	Total Number		Percent By Large Companies*		Percent By Small Companies		Total Footage		Percent By Large Companies*		Percent By Small Companies	
	1941	1940	1941	1940	1941	1940	1941	1940	1941	1940	1941	1940
Texas	10,439	9,775	33.8	34.4	66.2	65.6	37,797,241	36,604,646	43.6	44.1	56.4	55.9
Illinois	3,935	3,829	39.2	51.0	60.8	49.0	9,064,438	9,573,034	45.5	52.3	54.5	47.7
Oklahoma	2,162	2,147	24.7	22.1	75.3	77.9	5,747,482	5,986,583	33.1	32.2	66.9	67.8
Kansas	2,217	2,007	37.7	38.4	62.3	61.6	6,608,406	6,310,656	38.4	41.4	61.6	58.6
Louisiana	1,557	1,704	45.0	44.0	55.0	56.0	8,779,001	8,896,419	52.8	57.7	47.2	42.3
California	1,173	1,051	44.5	53.2	55.5	46.8	6,434,330	6,561,090	53.0	65.1	47.0	34.9
Others	10,792	10,047	5.0	0.3	95.0	99.7	21,443,576	20,005,289	8.9	11.5	91.1	88.5
U. S. Total	32,265	30,560	25.5	28.1	74.5	71.8	95,874,474	93,937,717	36.5	38.5	63.5	61.5

* In the above tabulation, the following companies were considered as the "larger Companies": Amerada, Arkansas Fuel, Atlantic, Barnsdall, Carter, Champlain Refining, C. C. M. O., Cities Service, Continental, Deep Rock, General Crude, General Pet., Geo. F. Getty, Gulf Oil, Honolulu, Houston Oil, Humble, Kettleman North Dome Assn., Magnolia, Mid-Continent, Ohio, Pan-American, Phillips, Pure, Republic Prod., Richfield, Rio Bravo, Shell, Sinclair, Skelly, S. O. Calif., S. O. Texas, Stanolind, Sun, Superior (Cal.), Superior (Okla.), Texas, T. P. Coal & Oil, Tide Water Associated, Union, Wilcox.

Pumping Purchases

Pumping installation decrease forecast by drilling cut; maintenance outlay to be greater than in 1941

DRASTIC reduction in the number of wells expected to be produced by artificial lifting methods is indicated for 1942. In the light of estimated drilling as permissible under M-68, the number of new wells to be pumpers will be materially reduced, this factor being largely responsible for a reduction in THE OIL WEEKLY'S estimated number of wells going on the pump from 14,994 in 1941 to 9936 in 1942, or 34 percent down. Due to so many unpredictable factors entering into costs and availability of pumping equipment of various types, no attempt has been made to estimate, as heretofore, the outlay for new equipment, nor have available data permitted any figures to show the number of such units required.

Maintenance costs for materials used in upkeep of present pumping equipment and such new units as may be made available under reduced completion schedules are expected to total $23,462,000, and thus to rise above the figure for 1941, despite the fact that oil companies will be forced, through priority and other restrictions, to recondition many units which in normal times would be scrapped and replaced with new.

In order to save metal requirements of pumping units, it is anticipated that an increased percentage of 1942 drilling over normal years will be allocated to flowing fields, reducing by that much the demand for new pumping equipment to keep pace with completions in non-flowing fields. The natural trend in older fields toward pumping, however, will largely compensate for the shift in completion practice, and in special instances, as in the East Texas field, will greatly outstrip it. In the East Texas field alone, during 1941, units newly placed on the pump outnumbered oil well completions in the ratio of 3.5 to 1. This ratio will be quadrupled in 1942, although many of the pumps required will come from abandoned wells in the same field. This is expected to become general practice in fields where the shift of equipment from a water-producing portion of the field to another producing crude requiring less treatment will step up net production without requiring additional units.

Estimates for maintenance are weighted to cover anticipated greater service demand on pumping equipment than obtained in 1941, it being considered highly probable that existing fields will be called upon in increasing degree to make up decrease in oil available through new completions, and that the shortage will be made up by according higher allowables to old wells, and by raising field quotas through elimination of shut-down days.

Reconditioning rather than replacement is looked upon by many companies as offering opportunity to keep units going, and wherever possible plans are being made for installing whatever type of equipment will give maximum life with minimum maintenance outlay.

Progressive shifting of pumping units, in which relatively light units handle pipe-line quality prorated production and are supplanted by units of greater capacity as water percent increases, is anticipated to permit sustaining many field quotas at high levels, and to enable worn-out units to be disassembled and combined into serviceable equipment at a cost which, although high on a basis of anticipated pumping hours, will permit the continuation in operation of wells which otherwise would be shut down through lack of equipment.

Should material and manufacturing conditions within the country change for the better during the year, estimates indicate that an extensive replacement and servicing program would be immediately initiated, the undue postponement of which will result eventually in the scrapping of many units before exhausting their economic life. Maintenance is expected to be directed toward extending unit life as well as endeavoring to maintain existing output levels.

1942 Pumping and Pumping Maintenance Estimate

STATE OR DISTRICT	Wells to go on Pump in 1942 After M-68	Average Number Wells Pumping During 1942	Maintenance for 1942 Indicated Since M-68
Total U. S. A.	9,936	353,409	$ 23,462,000
Arkansas	73	2,747	180,000
California	401	14,786	4,520,000
Eastern States—Total	3,109	186,913	4,182,000
Illinois	1,168	22,934	1,411,000
Indiana	87	1,862	114,000
Kentucky	90	14,550	292,000
Ohio	460	26,964	680,000
New York	352	21,057	255,000
Pennsylvania	902	81,946	989,000
West Virginia	50	17,600	441,000
Kansas	457	22,015	1,798,000
Louisiana—Total*	282	4,493	351,000
North Louisiana	148	3,800	292,000
South Louisiana	134	693	59,000
Michigan	167	2,971	214,000
Oklahoma*	421	55,183	4,155,000
Rocky Mountain Area—Total	123	6,163	809,000
Colorado	5	207	16,000
Montana	69	1,918	156,000
New Mexico	14	550	111,000
Wyoming	35	3,488	526,000
Southeastern States—Total	5	298	37,000
Texas—Total	4,905	57,674	7,216,000
East Texas Field*	2,150	8,036	1,162,000
Rest of East Texas*	141	2,605	224,000
North Texas	737	17,497	1,072,000
South Texas*	668	9,649	998,000
Texas Gulf Coast*	225	2,601	950,000
Texas Panhandle	323	4,946	511,000
West Texas*	516	4,701	1,825,000
West Central Texas	145	7,639	463,000
Other States†	23	167	11,000

* Some of these wells indicated to go on pump will use gas lift.
† Includes Missouri and Nebraska.

More Footage Drilled

Average well depth off, but second greatest footage is recorded as completions increase

THE YEAR'S completion of the third highest total number of wells in history ran up the second highest footage, the 1941 figure being 95,745,587 feet, led only by 1937's total of 101,105,230 feet. Average depth of well, however, continued the downward trend established in 1940, being 2967 feet for 1941. This is but 41 feet deeper than the average depth for the past 17-year period and shows the effect of augmented drilling programs in shallow well states such as New York, Pennsylvania and Ohio.

Out of the 38 districts in which wells were drilled during the year, Missouri stands out as the state drilling wells with the least average, the figure being but 709 feet. Deepest average well honors go to the state of Louisiana, with a figure of 5639 feet, surpassed only by two divisions, the Texas Gulf Coast, with an average depth of 6271 feet, and South Louisiana, averaging 7835 feet per well drilled during the year.

Most wells, of course, were drilled in Texas, and the aggregate footage there amounting to 39.5 percent of the total drilling in the United States during the year. Illinois, a very poor second, is followed by Louisiana, Pennsylvania, California and Kansas, in that order, and closely grouped, the five totaling 134,769 feet less than Texas, and accounting for another 39 percent of the total, leaving the other 30 percent to be distributed among the 21 states participating in the drilling race during the year, with but one well each being recorded by Georgia and Florida, the latter having the least total footage of the year, only 1280 feet being drilled in the state.

Illinois is far in the lead in number of wells and aggregate footage for wells drilled deeper, showing 133,236 feet deepened, and followed by Texas with 70,157 feet and Oklahoma with 60,087 feet. Only the three states enumerated showed more than 30,000 footage through deepening operations, the average per well being 552 for Texas, 551 for Illinois and 300 for Oklahoma. Deepest average deepening by district occurred in the East Texas area, where four wells were deepened 5614 feet for an average of 1403 feet each.

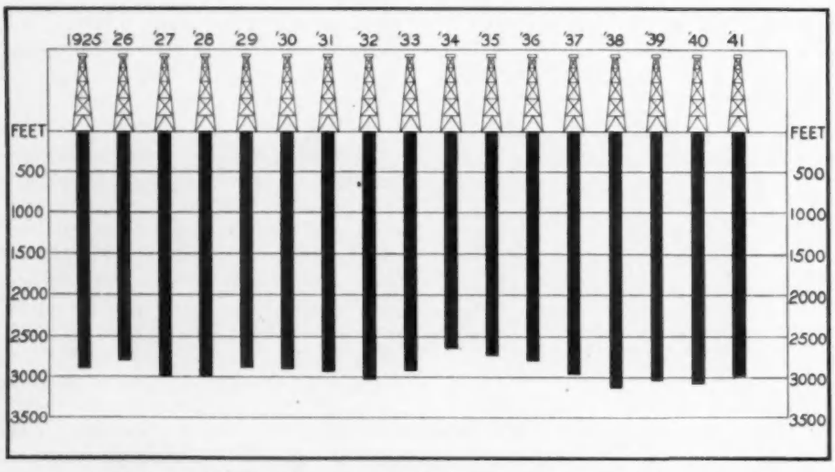
Water input, gas injection and salt water disposal projects accounted for 2349 wells drilled during 1941, Pennsylvania and New York accounting for nearly all water input wells, and Ohio, Illinois and Oklahoma, in that order, having most of the gas injection wells. Salt water disposal wells were drilled in 6 states, Kansas with 16, Illinois with 12, Oklahoma with 10 and Texas with 7 accounting for all but 3 of the wells drilled for this purpose.

Of the districts or areas showing greatest increase of footage in 1941 over 1940 totals, Colorado drilling 21 wells against 10, shows a footage increase of 101 percent, and is exceeded only by the East Texas area which, with Hawkins activity, takes first place with 115 percent increase in wells and 102.3 percent in footage. Greatest decrease in districts having more than 10 wells was recorded by the Texas Gulf Coast area, which fell off 37.3 percent in completions and 35.3 in footage drilled, this although the average depth per well increased almost 200 feet. Greatest showing was made by Iowa, drilling 6 wells in 1941 to 1 in 1940, for a figure of 500 percent increase in wells and footage increase of 997.3 percent. Nearest static for both years were the Corpus Christi area of Texas and the state of Mississippi, each being within a spread of 4 percent in both wells and footage completed in both sets of totals.

Average Drilling Depths

(Data revised back through 1933 to show Bradford, Pennsylvania, Completions on **The Producers' Monthly** basis.)

YEAR	Wells Completed	Footage Drilled	Average Depth per Well
1925	25,406	73,677,400	2900
1926	28,995	81,186,000	2800
1927	22,301	66,903,000	3000
1928	19,964	59,892,000	3000
1929	23,463	67,925,285	2895
1930	19,848	57,557,200	2900
1931	11,716	34,259,110	2924
1932	14,290	43,033,422	3011
1933	13,145	38,464,500	2926
1934	20,793	55,103,538	2650
1935	24,273	66,632,035	2745
1936	28,546	80,068,851	2805
1937	33,945	101,105,230	2979
1938	28,060	87,841,493	3131
1939	27,658	84,114,990	3037
1940	30,656	93,971,162	3065
1941	32,265	95,745,587	2967



Graphic portrayal of average depth variation over past 17 years of United States drilling

Wells, Footage, and Average Depths Drilled in the United States in 1940 and 1941

STATE	NEW WELLS OF 1941														
	Drilled for Oil or Gas			Water Intake			Gas Injection			Salt Water Disposal			Total New Wells		
	Wells	Footage	Av. Depth	Wells	Footage	Av. Depth	Wells	Footage	Av. Depth	Wells	Footage	Av. Depth	Wells	Footage	Av. Depth
Alabama	5	17,371	3474										5	17,371	3474
Arkansas	183	815,860	4458										183	815,860	4458
California	1,173	6,434,330	5485										1,173	6,434,330	5485
Colorado	20	68,192	3410										20	68,192	3409
Florida	1	1,280	1280										1	1,280	1280
Georgia	1	1,501	1501										1	1,501	1501
Illinois	3,649	8,994,639	2465				32	51,932	1623	12	17,867	1489	3,693	9,064,438	2454
Indiana	517	952,895	1843				1	1,180	1180	2	4,700	2350	520	958,775	1844
Iowa	6	14,006	2334										6	14,006	2334
Kansas	2,091	6,566,346	3140	2	5,930	2965				16	36,130	2268	2,109	6,608,406	3133
Kentucky	317	344,704	1087	5	3,840	768	1	616	616				323	349,160	1081
Louisiana	1,554	8,779,001	5649										1,554	8,779,001	5649
North Louisiana	700	2,080,206	2972										700	2,080,206	2972
South Louisiana	854	6,698,795	7844										854	6,698,795	7844
Michigan	882	1,996,403	2263										882	1,996,403	2263
Mississippi	197	976,076	4955							1	2,863	2863	198	978,939	4944
Missouri	85	60,301	709										85	60,301	709
Montana	250	534,225	2137										250	534,225	2137
Nebraska	81	191,095	2359										81	191,095	2359
New Mexico	393	1,119,748	2849										393	1,119,748	2849
New York	678	911,999	1345	441	568,233	1288							1,119	1,480,232	1323
Ohio	1,648	3,235,599	1963	57	25,031	439	51	25,738	504				1,756	3,286,368	1872
Oklahoma	1,930	5,687,926	2947	3	3,766	1255	19	29,036	1528	10	26,754	2675	1,962	5,747,482	2929
Pennsylvania	2,253	4,008,682	1779	1,675	2,678,800	1599							3,928	6,687,482	1703
South Dakota															
Tennessee	23	30,339	1319										23	30,339	1319
Texas	10,291	37,766,309	3671	1	711	711	13	10,113	779	7	23,929	3418	10,312	37,797,241	3665
East Texas Field	508	1,836,519	3615							5	18,997	3799	513	1,855,516	3617
East Texas Border	33	132,518	4016										33	132,518	4016
Rest of East Texas	565	2,609,277	4618							1	690	690	566	2,609,967	4611
North Texas	2,406	5,304,823	2205	1	711	711	12	9,563	797				2,419	5,315,097	2197
South Texas	2,377	10,231,422	4304										2,377	10,231,422	4304
Corpus Christi	1,292	7,270,561	5627										1,292	7,270,561	5627
Laredo	799	2,457,706	3076										799	2,457,706	3076
San Antonio	286	503,155	1759										286	503,155	1759
Texas Gulf Coast	742	4,653,178	6271										742	4,653,178	6271
Texas Panhandle	707	2,134,077	3018										707	2,134,077	3018
West Texas	2,312	9,685,479	4189							1	421	421	2,313	9,685,900	4187
West Central Texas	641	1,179,016	1839				1	550	550				642	1,179,566	1837
Utah	3	10,956	3652										3	10,956	3652
West Virginia	742	1,981,918	2671										742	1,981,918	2671
Wyoming	120	372,425	3104										120	372,425	3104
Total United States	29,093	91,874,126	3158	2,184	3,286,311	1505	117	118,615	1014	48	112,243	2338	31,442	95,387,474	3033

Wells, Footage, and Average Depths Drilled in the United States in 1941 and 1940

	Wells Drilled Deeper, 1941			*All Wells, 1941			*All Wells, 1940			*Percent Change of 1941 from 1940		
	Wells	Footage	Av. Depth	Wells	Footage	Av. Depth	Wells	Footage	Av. Depth	Wells	Footage	Average Depth
Alabama				5	17,371	3474	10	34,774	3477	— 50.0	— 50.0	
Arkansas	2	715	358	185	816,575	4413	179	925,299	5169	+ 33.0	— 13.3	— 1.5
California				1,173	6,434,330	5485	1,030	6,431,940	6245	+ 13.8		— 12.2
Colorado	1	605	605	21	68,797	3276	10	34,140	3414	+110.0	+101.5	— 4.0
Florida				1	1,280	1280	1	6,010	6010	.....	— 78.7	— 78.7
Georgia				1	1,501	1501						
Illinois	242	133,236	551	3,935	9,197,674	2337	3,947	9,762,301	2473	— 0.3	— 0.5	— 5.5
Indiana	26	11,611	447	546	970,386	1777	532	995,454	1871	+ 2.6	— 2.5	— 5.0
Iowa				6	14,006	2334	1	1,300	1300	+500.0	+997.3	+ 79.5
Kansas	108	19,228	178	2,217	6,627,634	2989	2,007	6,310,656	3144	+ 10.4	+ 5.0	— 4.9
Kentucky	12	3,151	2626	335	352,311	1051	367	375,555	1023	— 8.7	— 6.1	+ 2.7
Louisiana	3	970	323	1,557	8,779,971	5639	1,704	8,896,727	5221	— 8.6	— 1.3	+ 8.0
North Louisiana	2	460	230	702	2,080,666	2963	657	1,673,737	2548	+ 6.8	+ 24.3	+ 16.3
South Louisiana	1	510	510	855	6,699,305	7835	1,047	7,222,990	6899	— 18.3	— 7.2	+ 19.6
Michigan	3	1,490	497	885	1,997,893	2257	1,193	2,370,465	1987	— 25.8	— 15.7	+ 13.6
Mississippi				198	978,939	4944	190	970,282	5107	+ 4.2	+ 0.8	— 3.1
Missouri				85	60,301	709	93	85,746	922	— 8.6	— 29.6	— 23.1
Montana				250	534,225	2136	192	395,992	2062	+ 30.2	+ 34.9	+ 0.4
Nebraska	12	2,398	200	93	193,493	2080	53	117,693	2221	+ 75.4	+ 64.4	— 6.3
New Mexico	4	1,507	377	397	1,121,255	2824	623	2,001,265	3212	— 36.2	— 43.9	— 12.1
New York				1,119	1,480,232	1323	957	1,251,736	1308	+ 16.9	+ 18.25	+ 1.1
Ohio	18	8,173	454	1,774	3,294,540	1857	1,132	1,963,325	1734	+ 56.7	+ 67.8	+ 7.1
Oklahoma	200	60,087	300	2,162	5,807,569	2686	2,147	5,986,583	2788	+ 0.6	— 2.9	— 3.7
Pennsylvania	16	5,538	346	3,944	6,693,020	1697	3,690	6,296,778	1706	+ 6.8	+ 6.3	— 0.5
South Dakota							1	7,918	7918			
Tennessee				23	30,339	1319	27	31,027	1149	— 14.8	— 2.2	+ 14.8
Texas	127	70,157	552	10,439	37,867,398	3627	9,775	36,577,646	3742	+ 6.7	+ 3.5	— 3.1
East Texas Field				513	1,855,516	3617	323	1,161,672	3597	+ 58.8	+ 59.7	+ 0.6
East Texas Border				33	132,518	4016	27	*		+ 22.2		
Rest of East Texas	4	5,614	1403	570	2,615,581	4589	265	1,291,096	4875	+115.0	+102.58	— 5.9
North Texas	43	25,612	596	2,462	5,340,709	2169	2,154	5,606,162	2603	+ 14.2	— 4.7	— 16.7
South Texas	24	23,314	971	2,401	10,254,736	4271	2,559	10,243,363	4003	— 6.1	+ 0.1	+ 6.7
Corpus Christi	12	15,026	1252	1,304	7,285,587	5587	1,263	6,946,997	5500	+ 3.2	+ 4.8	+ 1.6
Laredo	9	4,978	553	808	2,462,684	3048	1,043	2,809,146	2693	— 22.5	— 12.3	+ 16.4
San Antonio	3	3,310	1103	289	506,465	1752	253	487,220	1926	+ 14.2	+ 3.9	— 9.0
Texas Gulf Coast				742	4,653,178	6271	1,185	7,197,666	6074	— 37.3	— 35.3	+ 6.1
Texas Panhandle	1	175	175	708	2,134,252	3014	627	1,914,867	3054	+ 12.9	+ 11.4	— 1.3
West Texas	52	14,036	270	2,365	9,699,936	4101	1,937	7,886,169	4071	+ 22.0	+ 22.9	+ 0.07
West Central Texas	3	1,406	469	645	1,180,972	1831	698	1,276,651	1829	— 7.5	— 7.4	+ 0.1
Utah				3	10,956	3652	3	17,712	5904		— 38.1	— 38.1
West Virginia	32	25,559	799	774	2,007,477	2594	649	1,641,847	2530	+ 19.2	+ 22.2	+ 2.5
Wyoming	17	13,689	805	137	386,114	2818	143	480,991	3364	— 4.1	— 19.7	— 16.2
Total United States	823	358,113	435	32,265	95,745,587	2967	30,656	93,971,162	3065	+ 5.2	+ 1.8	— 3.2

* Included with Rest of East Texas

Type of Rigs Used

Totals gain slightly during year, with rotaries on increase in many areas formerly using cable tools

USE OF rotary drilling rigs in the United States showed only a small increase in the past two years. Statistics compiled of all drilling operations in the nation show that 60.4 percent of all rigs in operation January 1, 1942, were rotary type as compared with 59.5 percent on January 1, 1940, an increase of .9 percent.

With the increase in rotary rigs, cable-tool operations dropped from 40.5 percent on January 1, 1940, to 39.6 percent at the first of this year. Of a total of 4336 rigs of all types operating January 1, 1942, 2616 were rotaries and 1720 cable tools.

Broken down by states, Michigan showed a large increase in the number of rotaries. Of 110 wells completed in the 3600-foot section in the Reed City field last year, only 2 were drilled with cable tools. There were 172 rigs, both rotary and cable, in operation January 1, 1942, 17 percent being rotary as against 2.9 percent January 1, 1940.

A number of other states showed substantial increases in number of rotary jobs, while others increased use of cable tools. Rotary operations in Illinois jumped from 50 percent two years ago to 88.9 percent on January 1, 1942. Likewise, Montana rotary use skyrocketed from 5 percent to 42.2 percent on the first day of this year. Wyoming jumped from 36.5 percent to 47 percent. Texas showed a gain in rotary operations, increasing from 76.6 percent two years ago to 82.2 percent at the present.

Conversely, states showing gains in cable-tool operations include Indiana, 67.1 percent as compared with 36.9 percent two years ago; Kentucky, 94.8 percent as against 89.6 percent on January 1, 1940; and Tennessee, which jumped from 62.5 percent two years ago to 100 percent cable tools at present.

Rotary and Cable Tool Drilling Operations in the United States, January 1, 1942

Table also embodies comparisons with operations January 1, 1940

STATE	DRILLING			RIGS UP			SHUT DOWN			ALL RIGS IN USE (DRILLING, RIGS UP, AND SHUT DOWN)						
											ROTARY			CABLE TOOL		
	Rotary	Cable Tool	Total	Rotary	Cable Tool	Total	Rotary	Cable Tool	Total	TOTAL (Rotary and Cable Tool)	Number	Percent of Total	Percent of All Active Rigs Accounted for by Rotary Outfits 2 Years Ago (January 1, 1940)	Number	Percent of Total	Percent of All Active Rigs Accounted for by Cable Tool Outfits 2 Years Ago (January 1, 1940)
Alabama	1	.....	1	1	.....	1	2	2	4	6	4	66.7	100.0	2	33.3	.....
Arkansas	23	.....	23	1	.....	1	5	1	6	30	29	96.7	93.7	1	3.3	6.3
California	183	7	190	59	1	60	43	4	47	297	285	96.0	98.1	12	4.0	1.9
Colorado	3	4	7	.....	.....	.....	1	15	16	23	4	17.4	5.9	19	82.6	94.1
Florida	.....	.....	.....	.....	.....	.....	2	.....	2	2	2	100.0	100.0	.....	.....	.....
Georgia	.....	.....	.....	1	.....	1	1	.....	1	2	2	100.0	100.0	.....	.....	.....
Illinois	267	31	298	19	2	21	49	9	58	377	335	88.9	50.0	42	11.1	50.0
Indiana	20	39	59	1	3	4	1	3	4	67	22	32.9	63.1	45	67.1	36.9
Kansas	154	44	198	16	5	21	11	5	16	235	181	70.2	76.7	54	29.8	23.3
Kentucky	2	31	33	.....	2	2	.....	4	4	39	2	5.2	10.4	37	94.8	89.6
Louisiana	187	.....	187	18	.....	18	29	.....	29	234	234	100.0	100.0	.....	.....	.....
North Louisiana	64	.....	64	9	.....	9	19	.....	19	92	92	100.0	100.0	.....	.....	.....
South Louisiana	123	.....	123	9	.....	9	10	.....	10	142	142	100.0	100.0	.....	.....	.....
Michigan	21	99	120	3	15	18	1	33	34	172	25	17.0	2.9	147	83.0	97.1
Mississippi	17	.....	17	3	.....	3	8	.....	8	28	28	100.0	100.0	.....	.....	.....
Missouri	.....	1	1	.....	1	1	1	5	6	8	1	12.5	13.6	7	87.5	86.4
Montana	7	30	37	2	2	4	23	12	35	76	32	42.2	5.0	44	57.8	95.0
Nebraska	7	4	11	3	1	4	5	2	7	22	15	68.2	.....	7	31.8	100.0
New Mexico	26	61	87	.....	7	7	4	26	30	124	30	24.2	23.3	94	75.8	76.7
New York	.....	80	80	.....	25	25	.....	20	20	125	.....	.....	.....	125	100.0	100.0
Ohio	.....	213	213	.....	30	30	.....	52	52	295	.....	.....	5.0	295	100.0	95.0
Oklahoma	217	39	256	15	3	18	24	4	28	302	256	84.8	84.4	46	15.2	15.6
Pennsylvania	.....	111	111	.....	15	15	.....	28	28	154	.....	.....	3.6	154	100.0	96.4
South Dakota	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	100.0	1	100.0	.....
Tennessee	.....	5	5	.....	.....	.....	.....	2	2	7	.....	.....	37.5	7	100.0	62.5
Texas	920	165	1,085	60	15	75	125	61	186	1,346	1,106	82.2	76.6	240	17.8	23.4
East Texas Field	2	.....	2	1	.....	1	6	.....	6	9	9	100.0	100.0	.....	.....	.....
East Texas Border Counties	5	.....	5	2	.....	2	3	.....	3	10	10	100.0	.....	.....	.....	.....
Rest of East Texas	55	1	56	3	.....	3	14	2	16	75	72	96.0	96.2	3	4.0	3.8
North Texas	101	15	116	7	1	8	29	16	45	169	138	81.7	86.6	31	18.3	13.4
South Texas	264	11	275	23	2	25	31	5	36	336	318	94.4	89.3	18	5.6	10.7
Corpus Christi	160	.....	160	15	.....	15	10	.....	10	185	185	100.0	100.0	.....	.....	.....
Laredo	74	.....	74	7	.....	7	11	.....	11	92	92	100.0	92.3	.....	.....	7.7
San Antonio	30	11	41	1	2	3	10	5	15	59	41	69.5	58.5	18	30.5	41.5
Texas Gulf Coast	114	.....	114	6	.....	6	12	.....	12	132	132	100.0	100.0	.....	.....	.....
Texas Panhandle	113	18	131	7	4	11	6	2	8	150	126	84.0	70.0	24	16.0	30.0
West Texas	253	76	329	11	5	16	17	23	40	385	281	73.0	68.5	104	27.0	31.5
West Central Texas	13	44	57	.....	3	3	7	13	20	80	20	25.0	5.5	60	75.0	94.5
Utah	.....	2	2	.....	2	2	.....	.....	.....	4	.....	.....	12.5	4	100.0	87.5
West Virginia	.....	225	225	.....	32	32	.....	54	54	311	.....	.....	1.1	311	100.0	98.9
Wyoming	19	9	28	.....	.....	.....	4	17	21	49	23	47.0	36.5	26	53.0	63.5
Total	2,074	1,200	3,274	202	161	363	339	360	699	4,336	2,616	60.4	59.5	1,720	39.6	40.5

Deep Drilling Gains

Number of tests drilled to 10,000 feet soars to a record annual total of 423; slump indicated by steel shortage may be offset by need for high octane oils

By GILBERT M. WILSON, Staff Writer

Deep drilling in 1941 again increased over the record of the previous 12-month period, with 423 tests drilled below 10,000 feet, as compared with but 321 in 1940. The outlook for deep drilling in 1942, in view of the critical steel situation, at first glance would seem to indicate such activity probably would decrease, but several influencing factors may change the picture to the extent that the year's deep drilling may approach, or possibly exceed the 1941 figures.

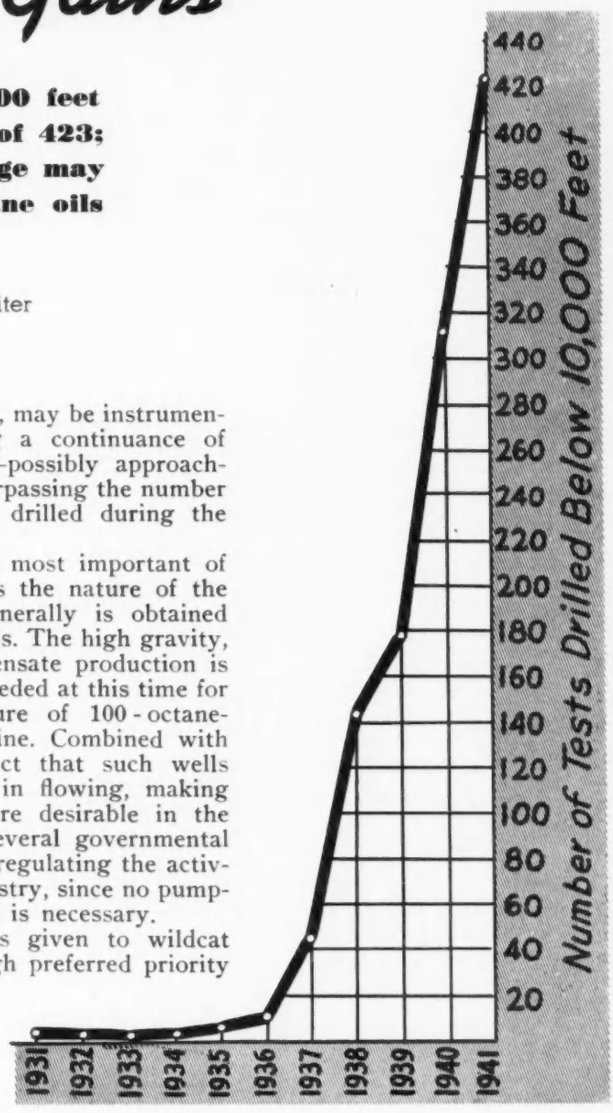
Scarcity of tubular goods and heavy steel equipment apparently will in many districts encourage the drilling of known shallower areas, since at least two, and perhaps up to three wells might be drilled to consume the equivalent amount of casing required by a single deep well. Also tending to discourage the drilling of deep wells, is the economic factor of slower pay-out due to production proration. An operator, in the face of skyrocketing taxes, increased labor costs, and general difficulties of obtaining well equipment, may well be more inclined to risk his capital in shallower, but more numerous holes. The possibility that he may encounter difficulties in being able to secure certain maintenance supplies for his drilling equipment, also may discourage the drilling of as many deep holes, causing him to concentrate instead on holes less likely to wear out his equipment to the extent that deep holes do.

Continued Activity Still Possible

Tending to offset the above points that might cause a slackening of deep drilling in 1942, are arguments, which, although still somewhat nebulous in view of the fast changing conditions brought about by this country's participation in the war, may be instrumental in causing a continuance of such activity—possibly approaching or even surpassing the number of deep wells drilled during the last year.

Perhaps the most important of these points is the nature of the crude that generally is obtained from such wells. The high gravity, distillate-condensate production is particularly needed at this time for the manufacture of 100-octane-aviation gasoline. Combined with this is the fact that such wells usually come in flowing, making them still more desirable in the eyes of the several governmental agencies now regulating the activity of the industry, since no pumping equipment is necessary.

The impetus given to wildcat drilling through preferred priority



Yearly Record of 10,000-Foot Drilling

Depth Zones	1931	1932	1934	1935	1936	1937	1938	1939	1940	*1941	Total
15,000-foot tests	0	0	0	0	0	0	1	0	0	0	1
14,000-foot tests	0	0	0	0	0	0	1	2	0	2	5
13,000-foot tests	0	0	0	0	0	0	6	8	7	3	24
12,000-foot tests	0	0	0	1	1	5	4	13	5	18	47
11,000-foot tests	0	0	3	1	1	5	52	52	107	112	333
10,000-foot tests	3	1	1	5	8	32	80	103	202	288	723
World Total	3	1	4	7	10	42	144	178	321	423	1133

* Includes both actually completed tests and those still drilling at end of year, of which 361 were completed and 62 drilling.

Yearly Record of United States 10,000-Foot Production*

	1937	1938	1939	1940	1941	Total
Pay Zones found 10,000—11,000 feet	7	7	20	7	11	52
Pay Zones found 11,000—12,000 feet	1	1	1	4	2	9
Pay Zones found 12,000—13,000 feet	..	..	..	..	..	..
Pay Zones found 13,000—14,000 feet	..	2	..	..	..	2
Total Pay Zones found	8	10	21	11	13	63

* Does not include two possible deep zones in two Venezuelan fields that are still being tested, nor two fields in Roumania and possibly one in Japan.

U. S. Drilling and Producing Depth Records by Districts

	DRILLING RECORD		PRODUCING RECORD	
	Feet	Year	Feet	Year
California	15,004*	1938	13,175	1938
Oklahoma	14,582	1939	9,992	1935
Texas	13,728	1938	11,427	1940
South Texas	13,728	1938	9,927	1940
Texas Gulf Coast	13,330	1941	11,427	1940
West Texas	12,786	1935	9,163	1941
East Texas Border	11,303	1939	6,035	1939
East Texas	10,900	1940	8,317	1941
North Texas	9,025	1941	6,425	1941
Texas Panhandle	8,013	1934	3,600	....
West Central Texas	6,505	1941	4,600	1940
South Louisiana	13,610	1940	13,266*	1938
Alabama	12,144	1941	....	....
North Louisiana	11,834	1941	10,395	1941
Colorado	10,815	1939	6,407	1932
Mississippi	10,808	1941	6,223	1940
Michigan	10,447	1941	7,850	1941
North Dakota	10,281	1938	....	....
Wyoming	10,121	1940	8,469	1936
West Virginia	10,018	1941	....	....
Florida	10,006	1939	....	....
Arkansas	9,550	1940	9,366	1940
Montana	9,678	1941	8,186	1936
New Mexico	7,957	1939	6,771	1929
South Dakota	7,800	1939	....	....
Illinois	7,207	1940	4,705	1941
Kansas	6,909	1931	6,481	1936
Indiana	5,035	1938	2,950	1938

* World records.
Note: All tests below 10,000 feet drilled with rotary tools. Deepest hole drilled with cable tools is 9,104 feet, in West Virginia.

ratings will no doubt stimulate deep tests in South Texas, Gulf Coast, Louisiana, and California, where fairly well known sedimentary conditions make the finding of additional oil reserves probable at depths below 10,000 feet. In certain of these areas, particularly along the Gulf Coast, the most likely prospecting readily available may be the deeper horizons. Further, despite the greatly increased drilling costs at such depths, and the relatively slow return of invested capital through production curtailment, deep drilling has continued to expand at a rapid rate, due in a large measure to the rapidly improving techniques in deep drilling and pressure control.

It seems probable that developments in the very near future in regard to the need for petroleum products for war purposes, particularly aviation gasoline, coupled with the degree to which steel and tubular goods is made available to the industry will largely determine which of the two opposing viewpoints will prove to be correct.

Louisiana far out-distanced the other two principal deep-producing states, by drilling 270 tests 10,000 feet or deeper, or nearly double the combined deep tests drilled by Texas and California. Of 423 deep wells drilled in the world in 1941, 288 were in the 10,000- to 11,000-foot category.

During 1940, no tests were drilled below a 14,000-foot level, but in 1941, two such wells were recorded, one in Oklahoma, and the other in California. The latter was Honolulu Oil Corporation's test in Buena Vista Hills, which broke the world's record for depths drilled with an all-electric rig. Depth of that hole was 14,622 feet.

Three new states, Alabama, Michigan, and West Virginia, were added to the slowly growing list of states exploring below 10,000 feet. Michigan and West Virginia each drilled a 10,000-foot hole, while Alabama had a test drilled to below 12,000 feet.

No new deep drilling activity was reported in European countries. The only other deep tests reported were two in Venezuela. Both of them were still being tested at the turn of the year, one below 10,000 and the other below 11,000 feet.

As might be expected, the continued increase in the number of deep tests drilled each year sooner or later is reflected in a steady expansion, or increase in the rate of discovery of new deep pay zones or fields. The past year showed a

United States Fields Producing From 10,000 Feet

FIELD AND COUNTY	Year Deep Zone Found	Average Depth of Deep Zone	No. Deep Wells Producing 1-1-42
California:			
Paloma, Kern County	1939	10,175	7
Coles Levee, Kern County	1939	10,100	6
Greeley, Kern County	1938	11,500	57
Kettleman N. Dome, Kings-Fresno Co.	1938	10,810	31
Rio Bravo, Kern County	1937	11,500	6
Ventura Avenue, Ventura County	1937	10,500	15
Long Beach, Los Angeles County	1938	10,150	1
Wasco, Kern County	1938	13,175	11
North Louisiana:			
North Lisbon, Claiborne Parish	1941	10,395	1
South Louisiana:			
DeLarge (Dulac), Terrebonne Parish	1938	13,265	1
Horseshoe Bayou, St. Mary Parish	1939	11,847	6
Neale, Beauregard Parish	1941	10,880	9
Horseshoe Bayou, St. Mary Parish	1937	10,900	5
Erath, Vermilion Parish	1940	11,388	7
Erath, Vermilion Parish	1941	11,618	
Erath, Vermilion Parish	1940	10,173	
Bayou Perot, Lafourche Parish	1940	11,290	3
La Pice, St. James Parish	1940	11,340	4
La Pice, St. James Parish	1939	10,915	
Bateman Lake, St. Mary Parish	1937	10,905	4
Bateman Lake, St. Mary Parish	1939	10,663	
Kennilworth, St. Bernard Parish	1939	10,610	1
Venice, Plaquemines Parish	1941	10,516	7
Venice, Plaquemines Parish	1939	10,610	
Venice, Plaquemines Parish	1941	10,600	
Jeanerette, St. Mary Parish	1939	10,485	13
Jeanerette, St. Mary Parish	1938	10,200	
Lake Long, Lafourche Parish	1939	10,260	4
Lake Long, Lafourche Parish	1937	10,400	
Lake Long, Lafourche Parish	1941	10,218	
Abbeville, Vermilion Parish	1939	10,535	5
South Louisiana—Continued:			
Schooner Bay, Vermilion Parish	1940	10,536	4
Lirette, Terrebonne Parish	1937	10,500	6
Lake Barre, Terrebonne Parish	1938	10,520	8
Paradis, St. Charles Parish	1939	10,340	19
South Houma, Terrebonne Parish	1938	10,310	2
Lafitte, Jefferson Parish	1937	10,265	7
Vermilion Bay, Iberia Parish	1939	10,241	2
Raceland, Lafourche Parish	1938	10,200	7
Lafourche Crossing, Lafourche Parish	1939	10,132	4
Lafourche Crossing, Lafourche Parish	1940	10,015	
Lake Salvador, St. Bernard Parish	1940	10,115	10
Ville Platte, Evangeline Parish	1939	10,245	95
Ville Platte, Evangeline Parish	1939	10,157	
Ville Platte, Evangeline Parish	1939	10,085	
Petit Chenier, Cameron Parish	1940	10,194	1
South Roanoke, Jeff Davis Parish	1939	10,120	6
Golden Meadows, Lafourche Parish	1939	10,040	20
Golden Meadows, Lafourche Parish	1940	10,365	
Lewisburg, Acadia Parish	1941	10,140	1
Pecan Lake, Cameron Parish	1941	10,174	1
Octave Pass, Plaquemines Parish	1941	11,370	2
Bayou Sale, St. Mary Parish	1941	10,100	7
Bayou Sale, St. Mary Parish	1941	10,310	
Lapyrouse, Terrebonne Parish	1941	10,883	1
Texas Gulf Coast:			
Chocolate Bayou, Brazoria County	1940	11,427	4
League City, Galveston County	1939	10,961	2
League City, Galveston County	1941	10,620	
Red Fish Reef, Chambers County	1940	10,327	5
Old Ocean, Brazoria County	1939	10,180	110
Old Ocean, Brazoria County	1937	10,670	
Angleton, Brazoria County	1939	10,466	9
Wilson Creek-Buckeye, Matagorda Co.	1938	10,058	2
Total: 46 fields, 63 pay horizons	....	.....	**539**

favorable increase in such new discoveries between 10,000 and 11,000 feet over the number found the previous year. From the record year of 1939, when 20 new horizons at this depth were discovered, it slumped to 7 in 1940, and in 1941 rose to 11.

Only two new zones between 11,000 and 12,000 feet were discovered during the year, as against four in 1940, and one in 1939. As in the years 1939-1940, no new horizons were found below 12,000 feet.

Tests Drilled Below 10,000 Feet By Areas, Depth Ranges and Years

COUNTRY	1931 Thru 1935	1936	1937	1938	1939	1940	1941 Comp.	1941 Drlg.	1941 Total	Total All Years
10,000-Foot Tests:										
United States	9	6	31	78	100	188	247	40	287	699
California	3	1	3	12	18	21	5	8	13	71
Louisiana	4	2	17	45	48	107	183	20	203	426
Texas	1	2	10	20	31	57	56	12	68	189
Oklahoma	1	1	1	..	..	1	...	...	...	4
North Dakota	..	..	..	1	..	..	...	...	...	1
Mississippi	..	..	..	..	..	1	1	...	1	1
Wyoming	..	..	..	..	1	1	...	...	...	2
Michigan	..	..	..	..	..	..	1	...	1	1
Florida	..	..	..	..	1	..	...	...	...	1
Colorado	..	..	..	..	1	..	...	...	...	1
West Virginia	..	..	..	..	..	..	1	...	1	1
Other Countries	1	2	1	2	3	14	...	1	1	24
Mexico	1	1	..	..	..	..	...	...	...	2
Cuba	..	..	..	..	1	..	...	...	...	1
Iran	..	1	..	..	..	..	...	...	...	1
Arabia	..	..	..	..	..	1	...	...	...	1
Canada	..	..	..	1	..	..	...	...	...	1
Colombia	..	..	..	..	..	2	...	...	...	2
Roumania	..	..	..	..	..	10	...	...	...	10
Sumatra	..	..	..	..	1	..	...	...	...	1
Venezuela	..	..	..	..	..	1	...	1	...	2
Germany	..	..	1	..	..	..	...	...	...	1
U. S. S. R.	..	..	..	1	..	..	...	...	...	1
Trinidad	..	..	..	..	1	..	...	...	...	1
11,000-Foot Tests:										
United States	3	1	4	51	52	107	97	14	111	329
California	1	1	1	30	24	56	31	5	36	149
Louisiana	..	..	2	15	27	40	49	5	54	138
Texas	1	..	1	5	1	10	17	4	21	39
Oklahoma	1	..	..	1	..	1	...	...	...	3
Other Countries	1	..	1	1	..	..	...	1	...	4
Roumania	1	..	..	..	..	..	...	..	...	1
Venezuela	..	..	..	..	..	..	...	1	...	1
Germany	..	..	1	..	..	..	...	...	...	1
Japan	..	..	..	1	..	..	...	...	...	1
12,000-Foot Tests:										
United States	1	1	5	3	13	5	13	5	18	46
California	..	..	1	1	2	1	1	3	4	9
Louisiana	..	1	4	2	11	4	11	1	12	34
Texas	1	..	..	..	..	..	...	...	...	1
Oklahoma	..	..	..	..	..	..	...	1	1	1
Alabama	..	..	..	..	..	..	1	...	1	1
Other Countries	..	..	..	1	..	..	...	...	...	1
Germany	..	..	..	1	..	..	...	...	...	1
13,000-Foot Tests:										
United States	..	..	..	6	8	7	2	1	3	24
California	..	..	..	2	7	6	...	1	1	16
Louisiana	..	..	..	3	1	1	1	...	1	6
Texas	..	..	..	1	..	..	1	...	1	2
14,000-Foot Tests:										
United States	..	..	..	1	2	..	2	...	2	5
California	..	..	..	1	1	..	2	...	2	4
Oklahoma	..	..	..	..	1	..	...	...	...	1
15,000-Foot Tests:										
United States	..	..	..	1	..	..	...	...	...	1
California	..	..	..	1	..	..	...	...	...	1
Total Deep Tests:										
United States	13	8	40	140	175	307	361	60	417	1104
California	4	2	5	47	52	84	39	17	56	250
Louisiana	4	3	23	65	87	152	244	26	270	604
Texas	3	2	11	26	32	67	74	16	90	231
Oklahoma	2	1	1	1	1	2	...	1	1	9
North Dakota	..	..	..	1	..	..	...	...	...	1
Mississippi	..	..	..	..	..	1	1	...	1	2
Alabama	..	..	..	..	..	..	1	...	1	1
Wyoming	..	..	..	..	1	1	...	...	...	2
Michigan	..	..	..	..	..	..	1	...	1	1
Florida	..	..	..	..	1	..	...	...	...	1
Colorado	..	..	..	..	1	..	...	...	...	1
West Virginia	..	..	..	..	..	..	1	...	1	1
Other Countries	2	2	2	4	3	14	...	2	2	29
Arabia	..	..	..	..	..	1	...	...	...	1
Germany	..	..	2	1	..	..	...	...	...	3
Venezuela	..	..	..	..	..	1	...	2	2	3
Mexico	1	1	..	..	..	..	...	...	...	2
Iran	..	1	..	..	..	..	...	...	...	1
U. S. S. R.	..	..	..	1	..	..	...	...	...	1
Canada	..	..	..	1	..	..	...	...	...	1
Colombia	..	..	..	..	..	2	...	...	...	2
Sumatra	..	..	..	..	1	..	...	...	...	1
Trinidad	..	..	..	..	1	..	...	...	...	1
Cuba	..	..	..	..	1	..	...	...	...	1
Roumania	1	..	..	..	..	10	...	...	...	11
Japan	..	..	..	1	..	..	...	...	...	1

Drilling Forecast

[*Continued from page 52*]

ping centers, and to the demand for certain crudes produced by the area. The area numbers many prospects which as yet have not been thoroughly prospected, with favorable areas not carried as prospects but lying between neighboring fields as also likely to come in for augmented prospecting activity.

The Texas Gulf Coast, with many fields already drilled up on spacing patterns less than specified by Washington, and with most of its most favorable prospects lying close to the coast line and in consequence requiring the drilling of holes in the 10,000-foot class, probably will see a decided drop in 1942 drilling totals, although, like most of the remainder of the state, activity there will be greater than the national average.

The Texas Panhandle, despite its value as a gas source, is expected to show a drop exactly coinciding with that estimated for the nation as a whole. Present state of field development, lack of attractive prospects, and probable difficulty in shipping augmented crude production all are expected to contribute to this drastic cut.

West Texas and West Central Texas, both showing percentages of dry holes for 1941 far in excess of other areas, are expected to show a decrease of around 40 percent for 1942. In both areas pumping considerations, transportation difficulties, and relative distance from centers of utilization are expected to militate against widespread granting of exceptions, resulting in most of the development being wildcatting in favorable localities and in efforts to extend present known areas.

These estimates, presented for 1942, are based upon statistics and forecasts collected from all producing areas, and in the case of 1942 drilling as forecast after M-68, are not intended to show what the industry deems desirable to drill in the forthcoming year, nor what it anticipates will maintain present production rates and today's proven reserves, but rather to present a composite picture of what the industry feels probably will be drilled, spacing, production, transportation and wildcatting all being evaluated as closely as possible, and anticipated materials shortages discounted in advance.

Peak Refinery Activity

Crude runs to stills materially above previous levels; military needs to make big imprint on 1942 operations

By GRADY TRIPLETT, Staff Writer

INFLUENCE of exceptionally heavy demands for refined products was clearly evident in refining operations throughout 1941, and the close of the year gave evidence that military requirements during 1942 would make strong imprints in refinery and consequently in production operations.

By August last year operating plants in the United States had 90 percent of their rated operating capacity on stream, and this did not drop more than two percentage points at the end of the year. Daily crude runs to stills passed the 4,000,000-barrel mark in August and held above that figure for the remainder of the year, although there was a slight drop from the October peak of 4,089,400 barrels, showing that seasonal trends still prevailed in consumption despite the pick up in military activity. The average daily crude run to stills in 1941 was 3,892,200 barrels, in contrast with 3,545,980 barrels in 1940. A total of 1,418,035,000 barrels of crude were charged to stills, against 1,294,283,000 barrels in 1940.

Daily refining capacity in operation, exclusive of idle plants, showed a marked increase during 1941, rising gradually but steadily from 4,325,000 barrels in January to a peak of 4,600,000 barrels in October.

Contrary to early impressions, military demand does not promise to throw a barrel-for-barrel call upon oil production. The program of the present is to manufacture 150,000 barrels of 100-octane-aviation gasoline daily. This, however, does not mean that another 150,000 barrels of crude oil must be added to daily refinery throughput. Manufacturing this high grade gasoline means further handling of crude oil that is charged to stills rather than handling that much more crude oil. In part this gasoline comes from processing gases, which only a few years back were used for firing stills.

Thus the refining industry in providing aviation motor fuel will seek first the highest octane base stock by selecting crude oil of that nature. The better its base stock the less it will be necessary to provide blending materials by processing still gases, cuts of natural gasoline and the use of tetraethyl lead. The fortunate oil producer in this program will be the owner of leases within chosen fields.

More recently the refining industry has been called upon to provide the raw material for the manufacture of 400,000 tons of synthetic rubber, a total to be reached in 1943. Here, again, the increase in refining output does not work back to corresponding demand for crude oil. In large measure this raw material comes from the working of still gases. Neither is the prospect of supplying an even higher rubber demand of as great influence on crude oil production as the figure indicates. In a normal year the United States consumes 650,000 tons of crude rubber. Should the Netherlands Indies latex source be finally lost, oil would of necessity take its place. But this tonnage could be supplied out of less than one half of one percent of the crude oil produced in the United States in a year.

Thus the refining industry, now engaged in the most stupendous expansion of its plant capacity, is not increasing its throughput in comparison. It is simply preparing to process its raw material further. Processes such as isomerization, alkylation and polymerization feed upon the gases from topping and cracking and from certain products of natural-gasoline plants.

Even toluol, now taken from crude oil for explosives manufacture, comes by further processing naphthas, which otherwise would remain in common refinery output.

Recently the attitude toward consumption of gasoline in civilian use has been to lower first estimates of 35 percent. Until records of a few months are available, effect of the tire situation offer little basis for calculations. It seems likely that use of the automobile will decline gradually as tires are worn out, and that influence will be relatively small for some time. Meanwhile the refining industry will expand its output of aviation gasoline and build a synthetic rubber industry. At some point it will begin to put the automobile back in use by providing tires and thus halt the decline in motor fuel consumption.

United States Refinery Activity Trend

MONTH	Daily Refining Capacity In Operation†				Crude Oil Runs To Stills			
	1941		1940		1941		1940	
	Barrels Capacity	Percent Operated	Barrels Capacity	Percent Operated	Daily Average	Monthly Total	Daily Average	Monthly Total
January	4,325,000	83	4,266,000	81	3,570,400	110,683,000	3,436,400	106,530,000
February	4,345,000	83	4,316,000	81	3,587,300	100,445,000	3,509,200	101,766,000
March	4,339,000	83	4,370,000	81	3,582,600	111,059,000	3,550,900	110,079,000
April	4,360,000	85	4,367,000	82	3,703,500	111,106,000	3,566,000	106,979,000
May	4,363,000	88	4,344,000	83	3,852,700	119,435,000	3,607,000	111,817,000
June	4,392,000	88	4,301,000	84	3,864,500	115,935,000	3,607,000	108,237,000
July	4,413,000	89	4,343,000	80	3,909,000	121,180,000	3,480,000	107,902,000
August	4,481,000	90	4,314,000	81	4,018,400	124,572,000	3,508,300	108,756,000
September	4,541,000	89	4,310,000	83	4,049,400	121,481,000	3,591,000	107,756,000
October	4,600,000	89	4,306,000	82	4,089,400	126,772,000	3,528,800	109,394,000
November	4,590,000	88	4,301,000	82	4,051,000	121,530,000	3,512,100	105,364,000
December	4,575,000*	..	4,294,000	82	4,027,000*	124,837,000*	3,538,800	109,703,000
Total or Average	4,444,000	..	4,319,000	..	3,892,200	1,418,035,000	3,545,980	1,294,283,000

* Preliminary estimated figure.
† Figures on daily refining capacity are exclusive of idle plants, consequently represent the capacities of refineries in operation. All figures taken from U. S. Bureau of Mines Reports.

U. S. Production Up

Record again broken as last half surge boosts output 50 million barrels over 1940's previous high totals

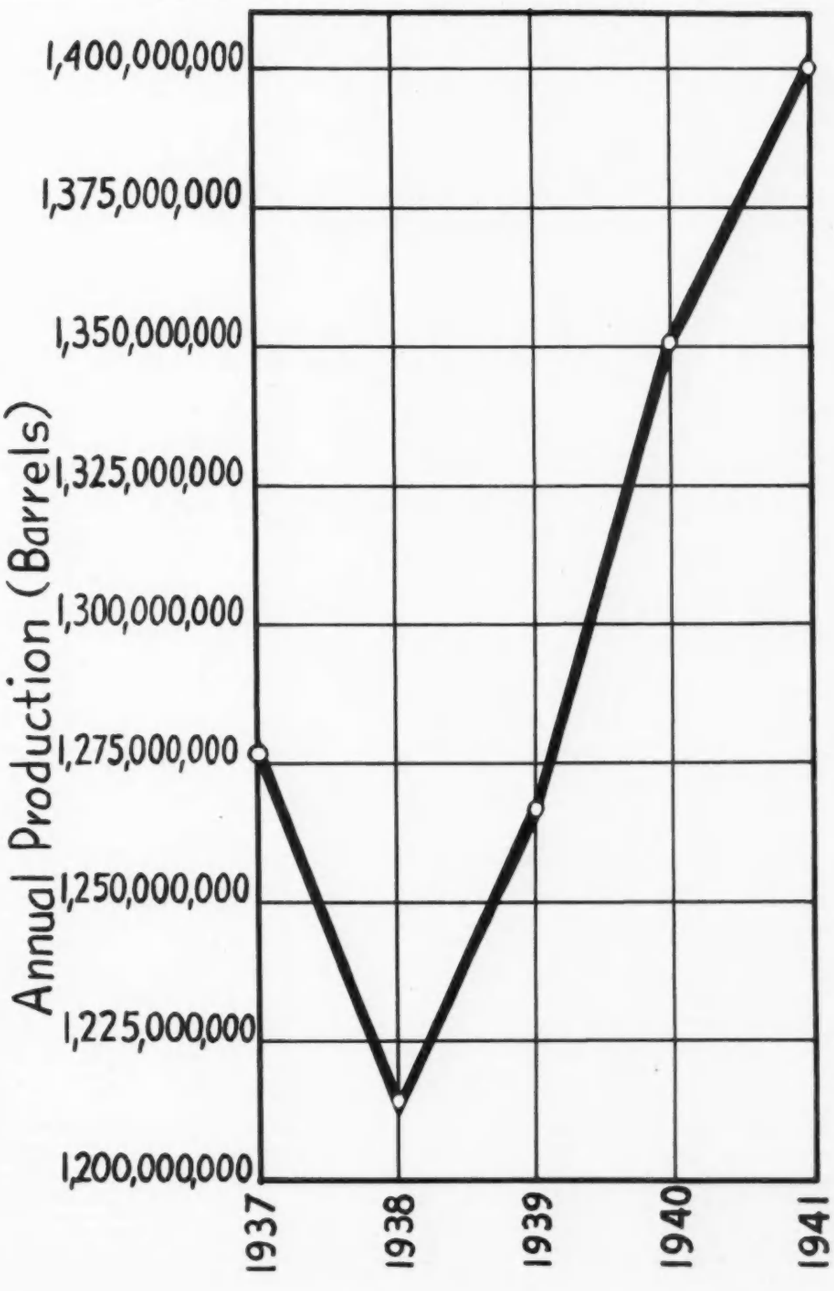
PRODUCTION of crude oil in the United States attained new heights in 1941, the total annual output rising to 1,403,784,000 barrels. This represents a gain of 50 million barrels over 1940, which itself was a record-breaking producing year. The increase in 1941, however, was not as large as the 86,479,000-barrel gain registered in 1940. Chief reason for the higher output last year were the demands made in the last half of the year by the war preparation program, which not only boosted military and industrial requirements but also civilian consumption due to greater employment.

With the nation at war and "business as usual" being disrupted to go on an "all out" military program, it is difficult to foresee the trend in 1942. Certainly, the shutting down of automobile manufacture and strict rationing of tires, will have a detrimental influence on gasoline sales as motorists attempt to preserve them. Difficulties in obtaining oilfield equipment, due to the steel shortage, may also tend to create a downward curve of output. Offsetting these factors will be the enlarged military demands, but it is doubtful if these will be of sufficient size to completely compensate for the other elements — so production during the coming year, especially in the latter portion, may possibly be somewhat lower than in 1941.

Production by states by all years is shown on pages 62 and 63

Kansas set the upward pace in 1941 by increasing its crude output 17 million barrels to a total of 83,045,000 barrels. Texas continued to be the bulwark of the nation's production, an increase of 14 million barrels giving it an annual output of 507,391,000 barrels, or nearly 39 percent of the country's total. A 13-million-barrel increase in Louisiana, a 11-million gain in Mississippi and a 7-million jump in California, represented the other principal leading advances during the year.

United States Annual Producing Rates for Past Five Years



United States Crude Oil Production, by States, by Years

(Complete production history of the nation, in thousands of barrels of 42 U. S. gallons. Sources—*Mineral Resources* and *Minerals Yearbook*, except where otherwise indicated in footnotes.)

YEAR	Arkansas	California	Colorado	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan	Mississippi	Missouri	Montana	Nebraska	New Mexico
1859														
1860							[E]							
1861							[E]							
1862							[E]							
1863							[E]							
1864							[E]							
1865							[E]							
1866							[E]							
1867							[E]							
1868							[E]							
1869							[E]							
1870							[E]							
1871							[E]							
1872							[E]							
1873							[E]							
1874							[E]							
1875							[E]							
1876		12					[G E]							
1877		13					[G E]							
1878		15					[G E]							
1879		20					[G E]							
1880		40					[G E]							
1881		100					[G E]							
1882		129					[G E]							
1883		143					[G]5							
1884		262					[G]4							
1885		325					[G]5							
1886		377					[G]5							
1887		678	76				[G]5							
1888		690	298				[G]5							
1889		303	317	1	33	1	[G]5				[H]			
1890		307	369	1	64	1	[G]6				[H]			
1891		324	666	1	137	1	[G]9				[H]			
1892		385	824	1	698	5	[G]7				[H]			
1893		470	594	1	2,335	18	[G]3				[H]			
1894		706	516	[H]	3,689	40	[G]2				[H]			
1895		1,209	438	[H]	4,386	44	[G]2				[H]			
1896		1,253	361	[H]	4,681	114	[G]2				[H]			
1897		1,903	385	1	4,122	81	[G H]				[H]			
1898		2,257	444	[H]	3,731	72	[G]6				[H]			
1899		2,642	390	[H]	3,848	70	[G]18				[H]			
1900		4,325	317	[H]	4,874	75	[G]62		[J]		[J]2			
1901		8,787	461	[H]	5,757	179	[G]137		[J]		[J]2			
1902		13,984	397	[H]	7,481	332	[G]185	549	[J]		[J]1			
1903		24,382	484		9,186	932	[G]554	918	[J]		[J]3			
1904		29,649	501		11,339	4,251	[G]998	2,959	[J]		[J]3			
1905		33,428	376	181	10,964	[I]3,750	[G]1,217	8,910	[J]		[J]3			
1906		33,099	328	4,397	7,674	[I]3,627	[G]1,214	9,077	[J]		[J]3			
1907		39,748	332	24,282	5,128	2,410	[G]821	5,000	[J]		[J]4			
1908		44,855	380	33,686	3,283	1,801	728	5,789	[J]		[J]15			
1909		55,472	311	30,898	2,296	1,264	639	3,060	[J]		[J]6			
1910		73,011	240	33,143	2,160	1,128	469	6,841	[J]		[J]4			
1911		81,134	227	31,317	1,695	1,279	472	10,721	[J]		[J]8			
1912		87,269	206	28,602	970	1,593	484	9,263	[K]					
1913		97,788	189	23,894	956	2,375	525	12,499	[K]		[K]			[K]
1914		99,775	223	21,920	1,336	3,104	503	14,309	[K]		[K]			
1915		86,592	208	19,042	876	2,823	437	18,192	[K]		[K]			
1916		90,952	197	17,714	769	8,738	[L]1,202	15,248	[K]		[K]	45		
1917		93,878	121	15,777	760	36,536	[L]3,088	11,392	[K]			100		
1918		97,532	143	13,366	878	45,451	[L]4,368	16,043	[K]			69		
1919		101,183	121	11,960	972	33,048	9,278	17,188	[K]		[K]	90		[K]
1920	[K]	103,377	111	10,774	945	39,005	8,738	35,714			[K]	340		[K]
1921	10,473	112,600	108	10,043	1,158	36,456	9,013	27,103			[K]	1,509		[K]
1922	12,712	138,468	97	9,383	1,087	31,766	8,973	35,376			[K]	2,449		[K]
1923	36,610	262,876	86	8,707	1,043	28,250	8,069	24,919			[K]	2,782		[K]
1924	46,028	228,933	445	8,081	935	28,836	7,407	21,124				2,815		98
1925	77,398	232,492	1,226	7,863	829	38,357	6,759	20,272	4			4,091		1,060
1926	58,332	224,673	2,768	7,760	808	41,498	6,274	23,201	94			7,727		1,666
1927	40,005	231,196	2,831	6,994	852	41,069	6,719	22,818	439			5,058		1,226
1928	32,096	231,811	2,774	6,462	1,052	38,596	7,359	21,847	594			4,015		943
1929	24,917	292,534	2,358	6,319	981	42,813	7,775	20,554	4,528			3,980		1,830
1930	19,702	227,329	1,656	5,736	994	41,638	7,389	23,272	3,911			3,349		10,189
1931	14,791	188,830	1,545	5,039	840	37,018	6,456	21,804	3,789			2,830		15,227
1932	12,051	178,128	1,136	4,673	806	34,848	6,287	21,807	6,910		[K]	2,457		12,455
1933	11,686	172,010	919	4,244	737	41,976	4,608	25,168	7,942	[K]	[K]	2,273		14,116
1934	11,182	174,305	1,139	4,479	838	46,482	4,860	32,869	10,603	[K]	[K]	3,603		16,864
1935	11,008	207,832	1,560	4,322	777	54,843	5,258	50,330	15,776	[K]	[K]	4,603		20,483
1936	10,469	214,773	1,650	4,475	822	58,317	5,633	80,491	11,928		[K]	5,868		27,223
1937	11,764	238,521	1,605	7,499	844	70,761	5,484	90,924	16,628		[K]	5,805		38,854
1938	18,180	249,749	1,412	24,075	995	60,064	5,821	95,208	18,745		[K]	4,946		35,759
1939	21,238	224,354	1,404	94,912	1,711	60,703	5,621	93,646	23,462	107	40	5,960	2	37,637
1940	25,775	223,881	1,626	147,647	4,978	66,139	5,188	103,584	19,753	4,400	44	6,728	276	39,129
1941[P]	26,190	230,401	1,851	133,913	6,671	83,045	4,736	116,265	16,301	15,399	47	7,537	1,643	39,559
Total	532,607	5,800,479	41,747	833,585	137,781	[I]1,177,623	[G]171,897	1,176,254	161,407	19,906	185	91,029	1,921	314,318

[A] Utah production estimated at 3,650 barrels in 1939; 3,126 barrels in 1940; and 189,726 barrels cumulative through 1940.

[B] *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer, shows for Alaska the following data: 1904-1919, estimated, 56,000 barrels; 1920, 11,000 barrels; 1921, 10,000 barrels; 1922-1928, estimated, 73,000 barrels; total, 1904-1928, 150,000 barrels.

[C] "Unclassified" includes 1912, Alaska and Michigan; 1913, Alaska, Michigan, Missouri and New Mexico; 1914-16, Alaska, Michigan and Missouri; 1917-18, Alaska and Michigan; 1919, Alaska, Michigan, Missouri and New Mexico; 1920, Alaska, Arkansas, Missouri, New Mexico and Utah; 1921-23, Alaska, Missouri and New Mexico; 1924-31, Alaska and Utah; 1932, Alaska, Missouri and Utah; 1933, Alaska, Mississippi, Missouri and Utah; 1934, Mississippi, Missouri and Utah; 1935, Mississippi, Missouri, Tennessee and Utah; 1936-40, Missouri, Tennessee and Utah.

[D] Pennsylvania and New York separated in years 1864-1881, by aid of *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer.

[E] *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer, gives the following additional estimates which are not shown by the official *Mineral Resources:* Ohio, 1860-1875, 200,000 barrels; West Virginia, 1860-1875, 2,800,000 barrels; Kentucky, 1860-1882, 161,000 barrels.

United States Crude Oil Production, by States, by Years—(Continued)

(Complete production history of the nation, in thousands of barrels of 42 U. S. gallons. Sources—*Mineral Resources* and *Minerals Yearbook*, except where otherwise indicated in footnotes.)

New York	Ohio	Oklahoma	Pennsylvania	Tennessee	Texas	[A] Utah	West Virginia	Wyoming	[B] Alaska	[C] Unclassified	Total United States	Total Value At Wells (Thousands of Dollars)	[O] Average Value Per Bbl.	YEAR
.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	2	$ 32	$20.00	1859
.....	E	.....	500	.....	.....	.....	E	.....	.....	.....	500	4,800	9.60	1860
.....	E	.....	2,114	.....	.....	.....	.....	.....	.....	.....	2,114	1,036	.52	1861
.....	E	.....	3,057	.....	.....	.....	.....	.....	.....	.....	3,057	3,210	1.05	1862
.....	E	.....	2,611	.....	.....	.....	E	.....	.....	.....	2,611	8,226	3.15	1863
[D F H]	E	.....	[D F] 2,116	.....	.....	.....	E	.....	.....	.....	2,116	20,897	8.15	1864
[D]100	E	.....	[D]2,398	.....	.....	.....	E	.....	.....	.....	2,498	16,460	6.59	1865
[D]144	E	.....	[D]3,454	.....	.....	.....	E	.....	.....	.....	3,598	13,455	3.75	1866
[D]134	E	.....	[D]3,213	.....	.....	.....	E	.....	.....	.....	3,347	8,067	2.40	1867
[D]146	E	.....	[D]3,500	.....	.....	.....	E	.....	.....	.....	3,646	13,217	3.62	1868
[D]169	E	.....	[D]4,046	.....	.....	.....	E	.....	.....	.....	4,215	23,730	5.60	1869
[D]211	E	.....	[D]5,050	.....	.....	.....	E	.....	.....	.....	5,261	20,504	3.90	1870
[D]208	E	.....	[D]4,997	.....	.....	.....	E	.....	.....	.....	5,205	22,591	4.40	1871
[D]252	E	.....	[D]6,041	.....	.....	.....	E	.....	.....	.....	6,293	21,440	3.75	1872
[D]396	E	.....	[D]9,498	.....	.....	.....	E	.....	.....	.....	9,894	18,100	1.80	1873
[D]437	E	.....	[D]10,490	.....	.....	.....	E	.....	.....	.....	10,927	12,648	1.15	1874
[D]352	E	.....	[D]8,436	.....	.....	.....	E	.....	.....	.....	8,788	7,368	.97	1875
[D]359	32	.....	[D]8,610	G	.....	.....	120	.....	.....	.....	9,133	22,983	2.52	1876
[D]525	30	.....	[D]12,610	G	.....	.....	172	.....	.....	.....	13,350	31,789	2.38	1877
[D]607	38	.....	[D]14,557	G	.....	.....	180	.....	.....	.....	15,397	18,045	1.17	1878
[D]787	29	.....	[D]18,898	G	.....	.....	180	.....	.....	.....	19,914	17,211	.86	1879
[D]1,041	39	.....	[D]24,987	G	.....	.....	179	.....	.....	.....	26,286	24,601	.94	1880
[D]1,095	34	.....	[D]26,281	G	.....	.....	151	.....	.....	.....	27,661	25,448	.92	1881
6,685	40	.....	23,368	G	.....	.....	128	.....	.....	.....	30,350	23,631	.78	1882
4,004	47	.....	19,125	G	.....	.....	126	.....	.....	.....	23,450	25,790	1.10	1883
3,231	90	.....	20,541	G	.....	.....	90	.....	.....	.....	24,218	20,596	.85	1884
2,658	662	.....	18,118	G	.....	.....	91	.....	.....	.....	21,859	19,198	.88	1885
2,151	1 783	.....	23,647	G	.....	.....	102	.....	.....	.....	28,065	19,996	.71	1886
2,075	5,023	.....	20,281	G	.....	.....	145	.....	.....	.....	28,283	18,877	.67	1887
1,789	10,011	.....	14,700	G	.....	.....	119	.....	.....	.....	27,612	17,948	.65	1888
1,897	12,472	.....	19,591	G	H	.....	544	.....	.....	.....	35,164	26,963	.77	1889
1,658	16,125	.....	26,800	G	H	.....	493	.....	.....	.....	45,824	35,365	.77	1890
1,585	17,740	H	31,424	G	H	.....	2,406	.....	.....	.....	54,293	30,527	.56	1891
1,273	16,363	H	27,149	G	H	.....	3,810	.....	.....	.....	50,515	25,907	.51	1892
1,032	16,249	H	19,283	G	H	.....	8,446	.....	.....	.....	48,431	28,950	.60	1893
942	16,792	H	18,078	G	H	.....	8,577	2	.....	.....	49,344	35,522	.72	1894
913	19,545	H	18,231	G	H	.....	8,120	4	.....	.....	52,892	57,632	1.09	1895
1,205	23,941	H	19,379	G	1	.....	10,020	3	.....	.....	60,960	58,519	.96	1896
1,279	21,561	1	17,983	G	66	.....	13,090	4	.....	.....	60,476	40,874	.68	1897
1,205	18,739	.....	14,743	G	546	.....	13,615	6	.....	.....	55,364	44,193	.80	1898
1,321	21,142	.....	13,054	G	669	.....	13,911	6	.....	.....	57,071	64,604	1.13	1899
1,301	22,363	6	13,258	G	836	.....	16,196	6	.....	.....	63,621	75,989	1.19	1900
1,207	21,648	10	12,625	G	4,394	.....	14,177	5	.....	.....	69,389	66,417	.96	1901
1,120	21,014	37	12,064	G	18,084	.....	13,513	6	.....	.....	88,767	71,179	.80	1902
1,163	20,480	139	11,355	G	17,956	.....	12,900	9	.....	.....	100,461	94,694	.94	1903
1,113	18,877	1,367	11,126	G	22,241	.....	12,645	12	N	.....	117,081	101,175	.86	1904
1,118	16,347	[I]8,264	10,437	G	28,136	.....	11,578	8	.....	.....	134,717	84,157	.62	1905
1,243	14,788	[I]8,091	10,257	G	12,568	.....	10,121	7	.....	.....	126,494	92,445	.73	1906
1,212	12,207	43,524	10 000	G	12,323	M	9,095	M9	N	.....	166,095	120,107	.72	1907
1,160	10,859	45,799	9,424	.....	11,207	M	9,523	M18	.....	.....	178,527	129,079	.72	1908
1,135	10,633	47,859	9,299	.....	9,534	M	10,745	M20	.....	.....	183,171	128,329	.70	1909
1,054	9,916	52,029	8,795	.....	8,899	M	11,753	M115	.....	.....	209,557	127,900	.61	1910
953	8,817	56,069	8,248	.....	9,526	M	9,796	M187	N	.....	220,449	134,045	.61	1911
874	8,969	51,427	7,838	.....	11,735	M	12,129	M1,572	K	4	222,935	164,213	.74	1912
948	8,781	63,579	7,917	.....	15,010	N	11,567	2,407	K	11	248,446	237,121	.95	1913
939	8,536	73,632	8,170	.....	20,068	N	9,680	3,560	K	8	265,763	214,125	.81	1914
888	7,825	97,915	7,838	.....	24,943	N	9,265	4,246	K	14	281,104	179,463	.64	1915
874	7,744	107,072	7 593	[L]1	27,645	N	8,731	6,234	K	8	300,767	330,900	1.10	1916
880	7,751	107,508	7,733	[L]12	32,413	N	8,379	8,978	K	10	335,316	522,635	1.56	1917
809	7,285	103,347	7,408	[L]8	38,750	N	7,867	12,596	K	8	355,928	703,944	1 98	1918
851	7,736	86,911	8,137	15	79,366	N	8,327	13,172	K	12	378.367	760,266	2.01	1919
906	7,400	106,206	7,438	14	96,868	K	8,249	16,831	K	13	442,929	1,360,745	3.07	1920
988	7,335	114,634	7,418	12	106,166	.....	7,822	19,333	K	12	472,183	814,745	1.73	1921
1,000	6,781	149,571	7,425	10	118,684	.....	7,021	26,715	K	13	557,531	895,111	1.61	1922
1,250	7 085	160,929	7,609	8	131,023	.....	6,358	44,785	K	18	732,407	978,430	1.34	1923
1,440	6,811	173,538	7 486	10	134,522	K	5,920	39,498	K	13	713,940	1,022,683	1.43	1924
1,695	7,212	176 768	8,097	24	144.648	K	5,763	29,173	K	12	763,743	1,284,960	1.68	1925
1,956	7,272	179,195	8,961	43	166,916	K	5,946	25,776	K	8	770,874	1,447,760	1.88	1926
2,242	7,593	277,775	9,526	60	217,389	K	6,023	21,307	K	7	901,129	1,172,830	1.30	1927
2,603	7,015	249,857	9,956	46	257,320	K	5,661	21,461	K	6	901,474	1,054,880	1.17	1928
3,377	6,743	255,004	11,820	19	296.876	K	5,574	19,314	K	7	1,007,323	1,280,417	1.27	1929
3,647	6,486	216,486	12,803	21	290,457	K	5,071	17,868	K	7	898,011	1,070,200	1.19	1930
3,363	5,327	180,574	11,892	6	332,437	K	4,472	14,834	K	7	851,081	550,630	65	1931
3,508	4,644	153,244	12,412	5	312,478	K	3,876	13,418	K	16	785,159	680,460	.87	1932
3,181	4,235	182,251	12,624	5	402,609	K	3,815	11,227	K	30	905,656	608,000	.67	1933
3,804	4,234	180,107	14.478	10	381.516	K	4,095	12,556	.....	41	908,065	904,825	1.00	1934
4,236	4,082	185,288	15,810	K	392,666	K	3,902	13,755	.....	65	996,596	961,440	.96	1935
4,663	3,847	206,555	17,070	K	427,411	K	3,847	14,582	.....	63	1,099,687	1,199,820	1.09	1936
5,478	3,559	228,839	19,189	K	510,318	K	3,845	19,166	.....	77	1,279,160	1,513,340	1.18	1937
5,045	3,298	174,994	17,426	K	475,850	K	3,684	19,022	.....	82	1.214,355	1,373,060	1.13	1938
5,098	3,156	159,913	17,382	50	483,528	4	3,580	21,454	.....	.....	1,264,962	1,294,470	1.02	1939
4,999	3,159	156,164	17,353	24	493,209	3	3,444	25,711	.....	.....	1,353,214	1,385,440	1.02	1940
5,179	3,317	154,378	16,742	12	507,391	4	3,421	29,782	.....	.....	1,403,784	1,575,000	1.12	....[P]1941
134,366	591,694	[L]4,986,856	1,003,400	[G]415	7,087,198	11	414,191	530,760	.....	572	25,210,202	$29,718,379	$1.18	....Total

[F] New York included with Pennsylvania.
[G] Tennessee included with Kentucky, 1876-1907, inclusive.
[H] Less than 500 barrels.
[I] Figures for Oklahoma and Kansas for years 1905-1906 shown together by *Mineral Resources;* here divided by aid of *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer.
[J] Michigan shown with Missouri in 1900-1911.
[K] Included under "Unclassified."
[L] Kentucky and Tennessee figures in years 1916-18 obtained with aid of *Mineral Resources* and *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer.
[M] Insignificant production of Utah (mostly used as fuel) shown with Wyoming.
[N] Little production but no record available.
[O] Figures on average price per barrel for years 1859-1875 taken from *Petroleum in the United States and Possessions*, by Arnold and Kemnitzer; remainder from *Mineral Resources* and *Minerals Yearbook*.
[P] Bureau of Mines figures for first 11 months; December estimated by THE OIL WEEKLY, with aid of weekly reports of American Petroleum Institute.

More Producing Wells

Oil wells now exceed 400,000 but rate of gain less despite high drilling pace as abandonments increase

NEED for continued drilling on as nearly a normal basis as possible is emphasized by accompanying statistics on flowing and pumping oil wells in the United States.

Total producing oil wells increased during 1941 to a new high of 400,061 as of December 31 from 391,617 a year before. The gain of 8444 wells was less than increases of 11,227 in 1940 and 12,750 in 1939, although 1941 was an exceptionally active year in drilling. The gain of 8444 wells occurred while 19,519 new oil wells were completed, indicating that 11,075 new wells were required to replace depletions.

To complete the 19,519 oil wells, it was necessary also to drill 6989 dry holes (36 dry to 100 oil). If the same ratio had accompanied merely "break even" oil well drilling of 1941 (11,075 new oil wells), then 3987 dry holes would have been entailed, or a total of 15,062 completions, without consideration of gas well completions, which actually totaled 2585 in 1941, and without counting water intake well completions, which are necessary in Pennsylvania and New York and which in 1941 totaled somewhat over 2000. Altogether, therefore, drilling of practically 20,000 new wells apparently would have been required in 1941 for maintaining the *status quo* on producing oil wells and for carrying on normal gas development.

Even with actual drilling of 32,265 wells of all classes in 1941, there was a decline in flowing oil wells from 48,482 to 48,310. And in meeting demand, it was necessary to take 9.7 barrels of oil per day from each well in the country, on the average, compared with 9.6 barrels daily in 1940.

Producing Oil Wells in United States and Average Production

Figures for 1940 and 1941 by The Oil Weekly, with cooperation of state conservation officials and others; earlier years by the Bureau of Mines.

YEAR	Number of Wells	Bbls. Prod. Per Well per Day
1921	274,500	4.9
1922	284,880	5.7
1923	290,100	6.6
1924	299,100	6.2
1925	306,100	6.5
1926	318,600	6.8
1927	323,300	7.7
1928	327,800	7.6
1929	328,200	8.4
1930	331,070	7.5
1931	315,850	7.2
1932	321,500	6.7
1933	326,850	7.7
1934	333,070	7.5
1935	340,990	8.1
1936	349,450	8.7
1937	363,030	9.8
1938	369,640	9.1
1939	380,390	9.2
1940	391,617	9.6
1941	**400,061**	**9.7**

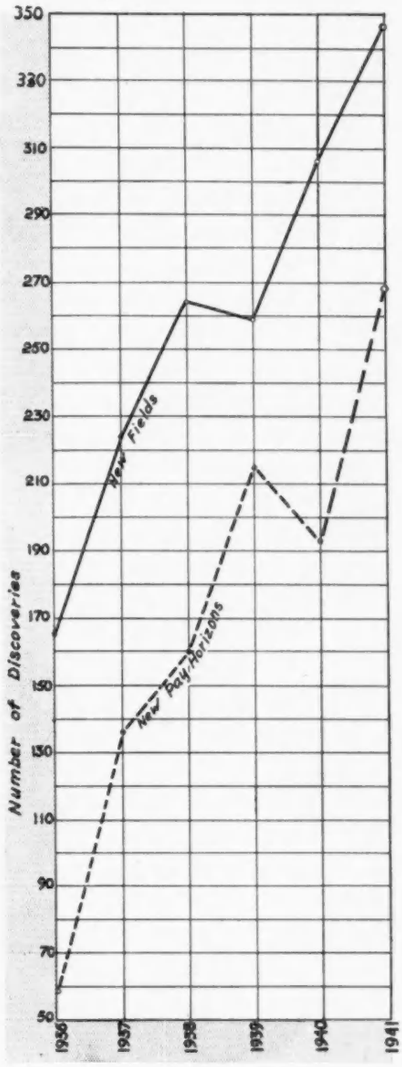
Producing Oil Wells Increase to New High in 1941, but Number Flowing Down Slightly

STATE OR DISTRICT	Flowing Oil Wells			Pumping or Agitated Wells			Total Producing Oil Wells			*Average Production per Well per Day During Year	
	End of 1940	End of 1941	Percent Change	End of 1940	End of 1941	Percent Change	End of 1940	End of 1941	Percent Change	1940	1941
Arkansas	355	368	+ 3.7	2,556	2,574	+ 0.7	2,911	2,942	+ 1.1	23.7	24.5
California	1,686	1,744	+ 3.4	13,675	15,200	+ 11.2	15,361	16,944	+ 10.3	40.8	39.1
Colorado	5	6	+ 20.0	203	208	+ 2.5	208	214	+ 2.9	17.9	24.0
Illinois	600	500	— 16.6	20,346	22,934	+ 12.7	20,946	23,434	+ 11.9	20.6	16.5
Indiana	.....	.....	.....	1,650	1,862	+ 12.8	1,650	1,862	+ 12.8	9.0	10.4
Kansas	334	350	+ 4.8	21,816	21,434	— 1.8	22,150	21,784	— 1.7	8.3	10.4
Kentucky	.....	.....	.....	14,200	14,300	+ 0.7	14,200	14,300	+ 0.7	1.0	0.9
Louisiana	2,042	2,407	+ 17.9	4,283	4,693	+ 9.6	6,325	7,100	+ 12.3	59.9	47.2
North Louisiana	420	350	— 16.7	3,590	4,050	+ 12.8	4,010	4,400	+ 9.7	17.5	16.6
South Louisiana	1,622	2,057	+ 26.8	693	643	— 7.2	2,315	2,700	+ 16.6	107.8	99.0
Michigan	88	164	+ 86.4	2,840	2,971	+ 4.6	2,928	3,135	+ 7.1	19.2	14.7
Mississippi	30	5	— 83.3	81	330	+307.4	111	335	+201.8	201.2	193.5
Missouri	.....	.....	.....	93	90	— 3.2	93	90	— 3.2	1.4	1.4
Montana	.....	.....	.....	1,792	1,918	+ 7.0	1,792	1,918	+ 7.0	10.5	11.1
Nebraska	.....	.....	.....	26	74	+184.6	26	74	+184.6	51.9	90.0
New Mexico	2,642	2,820	+ 6.7	752	817	+ 8.6	3,394	3,637	+ 7.2	33.8	30.8
New York	.....	.....	.....	20,500	20,950	+ 2.2	20,500	20,950	+ 2.2	0.7	0.7
Ohio	.....	.....	.....	25,200	24,000	— 4.8	25,200	24,000	— 4.8	0.3	0.4
Oklahoma	157	100	— 36.3	54,741	54,687	— 0.1	54,898	54,787	— 0.2	7.8	7.7
Pennsylvania	.....	.....	.....	82,100	82,250	+ 0.2	82,100	82,250	+ 0.2	0.6	0.6
Tennessee	.....	1	.....	35	30	— 14.3	35	31	— 11.4	1.0	1.0
Texas†	40,524	39,824	— 1.7	54,690	59,103	+ 7.9	95,214	98,927	+ 3.9	14.4	14.1
Dist. 1 (San Antonio Area)	53	83	+ 56.6	3,902	3,950	+ 1.2	3,955	4,033	+ 1.9	5.7	4.9
Dist. 2, (Corpus Christi Area)	1,650	2,030	+ 23.0	477	540	+ 13.2	2,127	2,570	+ 20.8	30.8	28.3
Dist. 3 (Gulf Coast)	5,411	5,575	+ 3.0	2,530	2,625	+ 3.8	7,941	8,200	+ 3.3	28.1	30.5
Dist. 4 (Laredo Area)	2,702	2,885	+ 6.8	5,100	5,185	+ 1.7	7,802	8,070	+ 3.4	18.6	17.1
Dist. 5 (E. Central Texas)	352	348	— 1.1	1,391	1,400	+ 0.6	1,743	1,748	+ 0.3	11.9	11.0
Dist. 6 (E. Texas Field)	20,362	17,700	— 13.1	6,329	8,075	+ 27.6	26,691	25,775	— 3.4	14.4	13.6
Dist. 6 (Outside E. Tex. Field)	638	825	+ 29.3	1,095	1,230	+ 12.3	1,733	2,055	+ 18.6	33.3	31.2
Dist. 7-B (West Central)	443	390	— 11.9	6,394	6,565	+ 2.7	6,837	6,955	+ 1.7	4.1	3.8
Dist. 7-C (West Texas)	27	48	+ 77.8	1,168	1,188	+ 1.7	1,195	1,236	+ 3.4	15.6	14.6
Dist. 8 (West Texas)	6,855	7,750	+ 13.1	4,261	5,290	+ 24.1	11,116	13,040	+ 17.3	20.3	19.4
Dist. 9 (North Texas)	1,951	2,115	+ 8.4	17,352	17,740	+ 2.2	19,303	19,855	+ 2.9	5.7	5.5
Dist. 10 (Panhandle)	80	75	— 6.3	4,691	5,315	+ 13.3	4,771	5,390	+ 12.9	16.0	14.9
Utah	.....	.....	.....	21	17	— 19.0	21	17	— 19.0	0.4	0.6
West Virginia	.....	.....	.....	18,100	17,800	— 1.7	18,100	17,800	— 1.7	0.5	0.5
Wyoming	19	21	+ 10.5	3,435	3,509	+ 2.2	3,454	3,530	+ 2.2	20.4	33.4
United States Total	48,482	48,310	— 0.4	343,135	351,751	+ 2.5	391,617	400,061	+ 2.2	9.6	9.7

* Daily average production of area for year divided by average number of wells on production during year, that is, between January 1, and December 31.
† District numbers are those into which the state is divided by the Texas Railroad Commission in administering proration.

Many Fields Found

Finding of both new fields and deeper horizons rise to record levels, indicating nation's oil supply sources not depleted



That it has not yet become exceedingly difficult to find new sources of petroleum supply in the United States is indicated by the continued rise in field discovery rates. During 1941 the greatest number of both new fields and new producing horizons in previously known fields ever attained in any 12-month period were uncovered. The number of oil-producing fields were augmented by the surprising total of 346, and in addition 267 new producing horizons in already located pools were discovered. Combined, these 613 new supply sources of petroleum represent a very material gain in rate of discoveries, constituting an increase of 119 over the 494 new sources found during 1940, which at the time established a new all-time finding peak.

List of new fields and new horizons found in 1941 appears on pages 66 to 74

Since the ultimate number of fields will not be exhausted suddenly, but will become harder to find at gradual rates whenever the time approaches that the country nears depletion of its petroleum supply sources, it would appear that succeeding years should continue to see a high rate of finding new crude production sources. That the United States is not experiencing undue trouble in locating new petroleum sources is indicated not alone by the record level of discoveries the past year, but by its record for recent years. The past five years have seen the discovery of 2370 new petroleum supply sources, of which 1399 have been entirely new structures and 971 have been new productive formations on previously found structures. The anticipated decline in overall drilling during 1942 should have little bearing on field discovery rates, for government priority regulations encourage wildcatting.

The average depth of the 613 discovery wells of 1941 was considerably deeper than for previous years. Their average depth of 4352 feet being in contrast with 3444 feet in 1940 and 4253 feet in 1939.

United States Discovery Trend in Finding New Petroleum Supply Sources

	Number New Fields Found						Number New Pay Zones Found In Old Fields						Average Depth of Discoveries*					
	1941	1940	1939	1938	1937	1936	1941	1940	1939	1938	1937	1936	1941	1940	1939	1938	1937	1936
Arkansas	5	3	3	4	3	1	..	1	..	..	2	..	7528	5546	6879	6207	6822	4900
California	10	1	4	8	6	7	5	1	..	5	2	..	5941	7252	8251	7489	7975	5950
Illinois	41	30	33	16	8	1	29	10	8	..	2	..	2640	2612	2500	2590	2633	1037
Indiana	8	6	11	5	1	..	2	1	7	1	..	..	1696	1954	1763	1708	2174	....
Kansas	49	33	33	43	52	71	19	16	17	7	5	1	3360	3216	2943	3396	3293	3325
Kentucky	3	3	4	3	2	1	..	1	4	1	..	1	1066	1512	1619	1588	1385	1362
Louisiana	29	20	14	20	19	5	49	39	59	47	19	13	7809	6025	8019	7185	6521	6087
North Louisiana	12	4	..	1	4	..	4	1	1	3	1	1	4867	4083	8901	6969	5645	5175
Louisiana Coast	17	16	14	19	15	5	45	38	58	44	18	12	8569	7967	8080	7400	7398	6998
Michigan	18	26	16	19	5	12	7	1	3	2	..	..	2466	2102	1772	2099	2970	2553
Missouri	..	1	..	..	..	..	..	..	..	..	..	..	....	400	....	....	....	....
Mississippi	2	1	1	..	..	..	..	1	1	..	..	..	4066	5617	4719	....	....	....
Nebraska	1	1	1	..	..	..	2	..	..	..	..	..	2347	2453	2282	....	....	....
New Mexico	5	8	5	7	3	..	1	..	1	..	..	..	2710	2214	3003	....	....	....
Oklahoma	53	46	22	18	18	..	21	17	14	1	4	2	3360	3144	3891	4720	4177	4165
Rocky Mountains	5	2	5	8	3	3	..	3	4	2	2	2	2702	2904	3582	3623	3473	3721
Texas	117	125	107	113	104	64	132	102	97	94	100	39	4452	4649	4135	4303	4039	3842
East Texas	5	3	3	4	4	3	4	2	..	3	1	..	4781	5899	3260	5689	5547	4915
North Texas	38	35	34	19	20	8	28	10	16	10	10	2	3516	3210	2824	3190	2596	1811
Gulf Coast	18	14	10	10	15	16	14	11	10	16	18	7	7060	7559	7281	6921	6741	5970
South Texas	29	41	35	49	41	22	68	64	65	60	67	30	4652	5159	4622	4631	4175	4061
West Texas	14	18	9	12	17	9	7	2	3	..	..	..	4236	3666	3760	3823	3498	3877
Panhandle	..	..	1	2	1	..	..	..	..	..	2	..	....	....	2895	3126	3164	....
West Central	13	14	15	17	6	6	11	3	3	5	2	..	2807	2399	2006	2746	2555	2416
Total	346	306	259	264	224	165	267	193	215	160	136	58	4352	3444	4253	4039	4005	3694

* Depth of discovery wells of both new fields and new pay horizons.

Arkansas

NEW FIELDS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
E. Schuler	Union	Atlantic Refg.'s Burns 1, NE SW 13-18-17	8–4	Morgan	5780	380	....
Macedonia	Columbia	McAlester Fuel's Franks 1, SE SE 16-18-21	7–8	Smackover	8990	480	Dist.
Mount Holly	Union	Atlantic Refg and Phillips Pet.'s Davis 1, NE NW 15-17-18	11–7	Smackover	7166–68	550	38
Patton	LaFayette	Tide Water Associated Oil's Moore 1, SE SE 29-17-24	9–23	Smackover	9320–30	261	45.2
Midway	La Fayette	Barnsdall Oil's Bond 1, NE NW 11-15-24	12–31	Smackover	6340–70	2000	39.5

California

NEW FIELDS

Helm	Fresno	Amerada Pet. Corp.'s Clover 31-34 sec. 34-16-17	10–9	Miocene	7485	242	65.0
Jacalitos	Fresno	Wilshire Annex Oil Co.'s No. 33-26E., sec. 26-21-15	10–10	Miocene	3905	103	39.0
Raisin City	Fresno	Shell Co.'s Properties Inc., 8-18., sec. 18-15-18	6–2	Miocene	5045	24	36.0
Riverdale	Fresno	Amerada Pet. Corp.'s Lawton 45-26, sec. 26-17-19	12–13	Miocene	6700	558	34.0
Dyer Creek	Kern	Shell Oil's Smith 56-X-11, sec. 11-26-27	9–16	Miocene	2361	201	15.2
E. Mt. Poso	Kern	Bradford Bishop's No. 1, sec. 22-27-28	11–25	Miocene	1433	150	15.8
Shafter	Kern	Continental Oil's, KCL-C-2, sec. 35-27-24	10–26	Miocene	12811	542	36.8
Union Avenue	Kern	Hancock Oil's, Roberts No. 1, sec. 6-30-28	1–29	Miocene	5358	100	15.2
Oak Canyon	Los Angeles	Western Gulf Oil's Lechler 1, sec. 31-5-17	2–1	Miocene	2415	144	22.3
Turnbull Canyon	Los Angeles	Continental Oil's Turnbull Comm. 1, sec. 13-2-11	10–19	Miocene	3447	163	24.0

NEW PAY HORIZONS

Inglewood	Los Angeles	Federal Oil's Smith 1, N. E. Smith Lease	3–5	Miocene	8340	2,080	31.2
Dominguez Ext	Los Angeles	Hiles Drilling's Grant 1, sec. 29-3-13	4–15	Miocene	7253	1,860	32.0
Del Valle Ext	Los Angeles	Jasper Petroleum's Videgain 1, sec. 17-4-17	7–3	Miocene	6078	1,500	31.5
Oak Canyon	Los Angeles	Western Gulf Oil's Lechler 2, sec. 31-5-17	7–7	Miocene	7187	800	31.5
Rincon	Ventura	C. C. M. O. Co.'s Hobson C-9, sec. 17-3-24	8–16	Pliocene	9300	130	26.0

Illinois

NEW FIELDS

Walpole	Hamilton	J. Chevigny's Phillips 1, SW NW SW 26-6s-6e	6–1	Aux Vases	3053–3193	53	....
Benton	Franklin	Adkins Orient Coal's 1, NE SW SE 24-6s-2e	1–21	Tar Springs	2111–2148	374	39
Bone Gap	Edwards	Tidewater's Gawthorp 1, NE NE NE 13-1s-10e	2–4	McClosky	3266–3325	46	....
Dahlgren	Hamilton	D. Duncan's Zeller 1, SE NE NE 34-3s-5e	1–14	McClosky	3337–3359	132	....
S. New Harmony	White	F. H. Rhodes' Golden 1, NW NW SE 29-5s-14w	1–28	Waltersburg	2218–2282	112	....
E. Patoka	Marion	Obering & Phillips' Thalman 1, NW NW NW 35-4n-1e	1–28	Weiler	1349–1360	48	....
W. Frankfort	Franklin	Adkins Orient Coal's 1, SE NE NW 12-7s-2e	2–25	Tar Springs	2040–2080	31	....
New Haven	White	Hiawatha's Stinson 1, SW SW NE 19-7s-11e	3–3	Tar Springs	2115–2129	107	....
Posey	Clinton	J. W. Ashoff's Lampen 1, 315′ NL, 160′ WL, NW, 16-1n-2w	4–1	Weiler	1105–1110	30	....
Lakewood	Shelby	W. H. Sloan's Cutler 1, SE NE 12-10n-2e	4–29	Aux Vases	1723–1735	37	....
Maunie	White	R. Halbert's Hueble 1, 330′ NL, 1050′ WL, SW 7-6s-11e	4–8	Tar Springs	2092–2118	65	....
Bonpas	Richland	Case-Pomeroy's Powers 1, SW SW SE 34-3n-14w	5–27	McClosky	3119–3129	260	....
Ellery	Edwards	R. B. Martin's Lester 1, S½ SW SW 19-2s-10e	5–20	McClosky	3341–3351	62	....
S. Maunie	White	Cherry & Kidd's Karch 1, SW NW NE 24-6s-10e	5–13	Aux Vases	2841–2872	141	....
Sailor Springs	Clay	E. Robinson et al's Tolliver 1, SW NW SE 26-4n-7e	6–3	Tar Springs	2327–2341	292	....
S. Lawrence	Lawrence	C. Evart's Catt 1, SW SE SW 23-2n-12w	5–27	Buchanan	1369–1397	25	....
Elkville	Jackson	Wiser Oil's Overholt 1, C SE SW 22-7s-1w	6–10	Bethel	2000–2028	5	....
N. Maunie	White	Continental's Ackerman 1, NE NW NE 25-5s-10e	6–10	Bethel	2824–2838	20	....
N. Inman	Gallatin	Blackstock's Cox 1, NE NW SW 2-8s-9e	7–15	McClosky	3020	40	....
Johnsonville	Wayne	Wiser Oil Co.'s Hilliard 1, S½ SE SW 27-1n-6e	7–15	McClosky	2992–3085	2406	....
W. Bonpas	Richland	C. R. Craft's Daube 1, E½ SW NE 8-2n-14w	8–26	McClosky	3144–3171	940	....
Eldorado	Saline	Thompson's J. Reich 1, NE SW NE 8-8s-7e	8–26	McClosky	2943–2998	92	....
W. Grayville	White	Wall-Mitchell's Kershaw 1, SW SW NE 22-3s-10e	8–5	Weiler	2853–2897	53	....
Jeff	Wayne	Pure's R. L. Johnson 1, W½ SE NE 12-1s-7e	8–19	McClosky	3135–3180	62	....
Mayberry	Wayne	Texas' F. N. Draper 1, C N½ NW SW 8-3s-6e	8–26	McClosky	3352–3380	75	....
Parkersburg	Richland	Ohio's Koerrge 1, 617′ EL, 360′ SL NW 29-2n-14w	8–16	McClosky	3117–3129	1459	....
Rural Hill	Hamilton	Shell's Ventress 1, SW SW SE 12-6s-5e	8–5	Lower O'Hara	3194	794	....
Alma	Marion	Swan-King's Kotva Heirs 1, 264′ SL, 610′ WL NW 36-4n-2e	9–23	Rosiclare	2070–2101	215	....
N. Benton	Franklin	Mohawk Drilling's Stuart 1, NE NE NE 11-6s-2e	9–16	Rosiclare	2789–2794	380	....
Boulder	Clinton	Texas' Gray 1, S½ NW SE 35-3n-2w	9–30	Devonian	2570–2655	17.5M	Gas
E. Centerville	White	Yingling, Hays, Ryan's Shepard 1, NE NE NE 5-4s-10e	9–9	Weiler	2887–2925	60	....
Epworth	White	W. F. Catlett's Calvert 1, SE SE NW 32-5s-10e	9–9	Palestine	2099–2188	90	....
Sims	Wayne	Bell Brothers' Fuhrer 1, S½ NE NW 33-1s-6e	11–4	McClosky	3342–3363	240	....
Stringtown	Richland	Nolf et al's Nuding 1, NW SW NW 6-4n-14w	11–11	McClosky	3028–3041	190	....
Xenia	Clay	Carter's Keller 1, W½ SW SW 4-2n-5e	11–25	Aux Vases	2786–2806	44	....
Ste. Marie	Jasper	Craft & Power's Wade 1, W½ SW NW 5-5n-14w	11–25	McClosky	2832–2935	500	....
Patton	Wabash	H. Fotiades' Mason 1, SW SE NW 27-1n-12w	11–18	McClosky	2309–2316	170	....
St. Paul	Fayette	Luttrell's Ford 1, NE NE NW 31-5n-3e	10–14	Bethel	1876–1891	41	....
St. Francisville	Lawrence	Sinclair-Wyoming's All-State Life 1, SE SE NW 22-2n-11w	10–21	Bethel	1747–1762	40	....
Ruark	Lawrence	DeKalb Agricultural Assn.'s King 1, S½ SW NE 8-2n-12w	10–21	Buchanan	1514–1531	72	....
W. Clay City	Clay	Williams' Nolan 1, C S½ SE NW 10-2n-7e	12–6	McClosky	3062–83	3710	....

NEW PAY HORIZONS

Salem	Marion	Paul Rossi's Brooks 8, NE SW 29-2n-2e	2–4	Trenton	4505–4618	130	....
Loudon	Fayette	Whisenant & Trenchard's Lilley 25-D, C E½ NW SE 16-8n-3e	5–27	Devonian	3063–3131	1700	29
Allendale	Wabash	T. B. Scott's Adams 1, 330′ NL, 330′ EL, SE SE SW 9-1n-12w	8–19	McClosky	2280–2286	70	....
S. Maunie	White	Cherry & Kidd's Karch 1-A, SE SW SE 13-6s-10e	8–12	Pennsylvanian	1369–1395	83	....
Storms	White	Shaffer-Stoll's Aud 1, SW NE SE 27-6s-9e	8–19	Cypress	2656–2685	32	....
Rural Hill	Hamilton	Texas' Lockwood 1, 444′ NL, 330′ WL, SW NW 13-6s-5e	9–3	Aux Vases	3175–3208	424	....
Rural Hill	Hamilton	Magnolia's Sloan 1, SE NE NW 13-6s-5e	9–23	McClosky	3243–3310	316	....
Dale	Hamilton	Shell's Ritcheson 5, 330′ SL, 1003′ WL, NE 7-6s-7e	9–9	Levias Lime	2998–3006	17	....
E. Patoka	Marion	Shell's Davidson 9-A, 389′ SL, 986′ EL NE 34-4n-1e	9–3	Bethel	1461–1481	177	....
N. Maunie	White	Magnolia's Roser 1, NW NE NE 25-5s-10e	9–9	McClosky	3080–3092	112	....
S. Maunie	White	Magnolia's Sisson-Higgins 7, NE NW SE 24-6s-10e	9–16	Bridgeport	1443–1475	25	....
Roland	White	Kingwood-Sinclair's McKenzie 3, NW NW SW 12-7s-8e	9–3	Bethel	2730–2751	70	....
Roland	White	Tidewater's Baker 4, NW NE NW 14-7s-8e	9–3	Aux Vases	2875–2911	70	....
Sailor Springs	Clay	Pure's W. H. Evans B-1, W½ NW SE 15-2n-8e	9–3	McClosky	3049–3080	113	....
Stokes	White	Pure and Carter's Atchley 1, SW SW SW 8-6s-9e	9–23	Paint Creek	2802–2835	55	....
New Harmony	White	Buehl-Herndon's Cox 2, NE SE 5-4s-14w	9–30	Levias	2809–2855	37	....
N. Benton	Franklin	Oil Carrier's Wayman 1, SE NW SW 1-6s-2e	10–7	Levias	2711–2792	70	....
Johnsonville	Wayne	Deep Oil's Pennington 2, S½ NE NW 35-1n-6e	10–24	Aux Vases	2994–3005	198	....
Johnsonville	Wayne	United Prod. Co.'s Schell 2, N½ SW NW 35-1n-6e	10–7	Levias	3196	350	....
Stokes	White	Shulman Bros' Porter 5, NE NW NW 18-6s-9e	10–7	Bethel	3049–3057	18	....
New Haven	White	Sinclair-Wyoming's G. Boetticher 3, NW NE SW 19-7s-11e	10–14	McClosky	2815–2860	44	....
Sailor Springs	Clay	D. Miller and Daubs' Palmer 1, 990′ NL, 482′ WL, SW 35-4n-7e	10–28	Weiler	2602–2610	53	....
Maud	Wabash	Magnolia's Alka 2, NW SE SW 34-1s-13w	10–28	Rosiclare	2639–2700	35	....
Allendale	Wabash	White & Wickwire's Price 1, W½ NE SW 14-1n-12w	11–4	Tar Springs	1613–1619	50	....
Boyleston	Wayne	Gulf's Elgin 1, NW NW NE 1-2s-7e	11–11	Levias	3310	19	....
Epworth	White	Continental's Hanna A-1, SW SW NE 32-5s-10e	11–11	Devonian	2092–2108	16	....
Epworth	White	National Petroleum's Queen 1, NE NE SW 32-5s-10e	11–4	Clore	2072–2109	128	....
Iola	Clay	Pfifer & Smith's Smith 1, NE NW 21-5n-5e	11–9	Bethel	2282–2309	8	....
N. Boos	Jasper	Texas' Beverlin 1, SE NW SE 5-6n-10e	11–25	Levias	2776–2808	100	....

Indiana

NEW FIELDS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
Welborn Switch	Posey	Whisenant & Trenchard's McFadden 1, NW NW SW 16-6s-14w	7-17	Cypress	2480-2500	33	37
Lamott	Posey	Haynes, Thomas et al's Scherer 1, C N½ NE NW 13-7s-13w	11-5	Tar Springs	1940-51	110	....
Patoka	Gibson	Brown's Antell 1, C NE NE 20-1s-11w	12-3	McClosky	2262	295	....
Mt. Vernon	Posey	Carter Oil & Gulf Refg.'s Maier 1, C N½ NE SW 1-7s-14w	12-3	Waltersburg Cypress	1965-83 2441-65	762	....
Johnson	Gibson	Field & Woodruff's Garrett-Hall 1, SW NW SW 31-2s-12w	10-22	Mansfield	1100-05	....	....
Hazlett	Gibson	Sylvestre's Potts 1, C W½ SW SW 24-1n-10w	10-1	McClosky	1701-05	170	....
Glen Dale	Daviess	Brown's McCracken 1, C S½ SW SE 16-2n-6w	6-20	Cypress	728-735	0.5M	Gas
Vernon	Vanderburgh	Drake's Nurrenbern 1, SE NE NE 6-7s-11w	4-21	Mansfield	1135-50	20	....

NEW PAY HORIZONS

Caborn	Posey	Central States Oil's Breeze 1, SW SW SW 19-6s-12w	8-10	Tar Springs	1980-90	150	....
Caborn	Posey	Central States Oil's Seifert 1, NW NW 30-6s-12w	8-20	Mansfield	1085-1103	80	....

Kansas

NEW FIELDS

NE. Davidson	Russell	Braden & McClure's Phillips 1, C N½ NW SE 34-15-11w	1-14	Gorham Sand	3313	125	....
Hugoton Area	Stevens	Northern Natural Gas' Bolds 1, NWc SE 26-32-35w	2-5	Ft. Riley	2775	8.3M	Gas
N. High Spot	Ellis	Stearns Drlg. et al's Witt 1, C S½ NE SW 28-12-16w	2-12	Lansing-KC	3626	647	36.4
Hugoton Area	Finney	Kansas Power & Light Co.'s Spratt 1, C 31-24-33w	2-19	Ft. Riley	2763	7.5M	Gas
Penokee	Graham	R. W. Shields' Paxson 1, NE 11-8-24w	2-19	KC—L	3781	216	....
Gibson	Cowley	Sinclair Prairie Oil's Gibson 1, SEc NW 29-34-3e	3-4	Bartlesville	3378	90	35
Shaeffer	Stafford	Atlantic Refg. et al's Shaeffer 1, CW½ NW SW 3-21-13w	3-19	Arbuckle	3552	1175	30.5
Bowman	Rice	Sharon Drlg. et al's Nevious 1, SWc NE 21-19-10w	3-19	Lansing-KC	3248	530	40.8
W. Kraft	Barton	Republic Natural Gas' Radenberg 1, CW½ NW SE 8-17-11w	3-26	Arbuckle	3332	68	39.5
Macksville	Stafford	Stanolind Oil & Gas' Nagel 1, C E½ NE SW 3-24-15w	4-3	Lansing-KC	3825	271	29
SW. Catherine	Ellis	Derby Oil et al's Miller 1, C S½ SW SW 17-13-17w	4-3	Arbuckle	3653	185	30.5
E. Frog Hollow	Cowley	Tulsa Oil Corp. et al's Miller 1, SW SE NE 15-32-5e	4-19	Bartlesville	3105	40	42
Kruckenberg	Barton	Schermerhorn Oil's Merten 1, CE¼ NE SW 11-19-15w	4-19	Basal Sand	3550	8.5M	Gas
NW. Ainsworth	Barton	Continental Oil's Stoskopf 1, SE NW SW 28-16-13w	5-3	Arbuckle	3403	539	35
Preston	Pratt	George Reeves et al's Stark 1, C W½ SW NW 18-26-11w	5-21	Viola	4158	11.96M	Gas
....	Russell	Shell Oil's Ruby 1, NWc NE 36-14-13w	6-4	Lansing-KC	2901	2946	....
Rusch	Russell	Westgate-Greenland et al's Rusch 1, C E½ SE NE 29-14-14w	6-14	Arbuckle	3223	3000	....
....	Greenwood	McPherson Drlg. Co. et al's Batesman 1-A, SE SW NW 24-28-11e	6-25	Kansas City	1210	15	....
Straub	Barton	Louck & Moncrief's Dutton 1 N½ NW SW 36-18-11w	6-25	KC-L	3126	123	28
Dayton	Phillips	Carter Oil et al's Friebus 1, C W½ SW NW 36-2-19w	7-1	Lansing-KC	3250	328	35.8
Ahnert	Stafford	Stanolind Oil & Gas' Ahnert 1, C E½ NE SE 26-22-13w	7-9	Arbuckle	3761	1440	28
Peace Creek	Reno	Simpson Oil et al's Snowbarger 1, SW SE NE 21-23-10w	7-30	Viola	3789	3000	41.5
Hewitt	Norton	Phillips Pet. et al's Hewitt 1, C S½ SE NE 11-4-21w	7-30	Lansing-KC	3404	66	36.8
Gustason	Russell	Central Pet. et al's Gustason 1, C S½ SE NW 14-15-12	8-6	Arbuckle	3257	163	39
E. Pawnee Rock	Barton	Helmrich & Payne et al's Unruh 1, C W½ SW NW 17-20s-15w	8-13	Arbuckle	3874	583	28.5
Forest Hill	Russell	Central Pet. et al's Steinlie 1, C N½ NW NE 29-15-12w	8-13	Arbuckle	3323½	1099	40
Patterson	Kearny	Stanolind Oil & Gas' Patterson 1, C E½ SE SE 23-22-38w	8-13	Cherokee	4780	2200	34
Ervay	Rooks	Cities Service Oil's Ervay 1, SEc 2-10-16w	8-13	Lansing	3168	115	37
Stickney	Barton	Allen, Mabee et al's Stoskopf 1, NWc 29-16-13w	8-20	Arbuckle	3390	50	35
W. Ainsworth	Barton	W. N. Bartlett et al's Wondra 1, SE NE NE 5-17-13w	8-20	Arbuckle	3361	96	....
Bruce	Cowley	Trees Oil & Phillips' Bruce 1, NW NW NE 9-30-4e	9-3	Arbuckle	3315	690	22
SE. Sugar Loaf	Ellis	Darby Oil's Dreiling 1, SEc NW 28-13-17w	9-10	KC-L	3626	352	....
N. Eastbourough	Sedgwick	National Refining's Thompson 1, SW SE NW 4-27s-2e	9-21	Miss	2958	35	41
Youngmeyer	Butler	Allison & Phillips Pet.'s Porter 1, NW NE NW 25-28s-8e	9-24	Arbuckle	2919	50	34.8
Bergtal	Barton	Helmerich & Payne's Schmidt 1, C E½ SE NW 22-20s-15w	10-1	Arbuckle	3671	13	....
....	Elk	McPherson et al's Clogson 1, SW SE SE 21-28s-11e	10-2	Sand	1210	5	33
Gettysburgh	Graham	Cities Service's Montgomery 1, SWc NW 7-8-23w	10-19	KC-L	3750	71	39.1
W. Barnholdt	Rice	Westgate-Greenland Oil Co.'s Harder 1, C N½ NW SW 36-20-6w	10-26	Miss	3371	45	....
Mohl	Russell	El Dorado Refg.'s Mohl 1, SE SE SE 18-14-13w	10-29	Gorham	3258	153	....
Hitz	Stafford	Nelson Dr. Co.'s Hitz 1, SEc NW 4-24-12w	10-29	Viola	3836	6.4M	Gas
E. Welch	Rice	Aladdin Oil Co.'s Lackey 1, CWl SW SE 1-21-6w	10-29	Miss. L	3348	278	....
....	Leavenworth	Mosbacher et al's Bell Est. 1, NW NE NE 12-10s-20e	11-1	Miss	1487	1.492M	Gas
....	Leavenworth	Mosbacher et al's Dolman 1, NW NW SE 27-9s-20e	11-12	Miss	1615	7.5M	Gas
....	Pratt	Central Pet. et al's Ward 1, C E½ SE NW 11-26s-12w	11-31	Viola	4140	2.729M	Gas
....	Trego	Aylward Prod. et al's Schaefer 1, SW SW NE 10-12s-21w	12-1	Arb	4003	30	35
NE. Peace Creek	Reno	Leader Oil Co.'s Tonn 1, SWc 11-23-10w	12-17	Viola	3768	3000	41
Friendship	Reno	Rocket Dr. Co.'s Soper 1, N½ NE NW 30-25-4w	12-17	Viola	3986	495	36.8
Hendrickson	Reno	Central & Iron Dr. Co.'s Hendrickson 1, CW½ NW NE 2-23-10w	12-23	Viola	3744	217	36
Sun City	Barber	Pryor & Lockhart's Massey 1, CEl NE NW 35-30-15	12-23	KC-L	4344	720	....

NEW PAY HORIZONS

Iuka	Pratt	Skelly Oil's Helmke 1, CW½ SW SW 1-27-13w	1-8	Arbuckle	4367	1572	39.1
Geneseo	Rice	Continental Oil's Powell 4, SWc NW NW 31-18-7w	2-8	Simpson	3213	150	....
Bloomer	Ellsworth	Transwestern Oil's Dougherty 2, C W½ SW NE 32-17-10w	3-8	Conglomerate	3268	28	....
Shaeffer	Stafford	Bodine Drlg. Co.'s Willcut 1, C E½ NE SE 4-21-13w	4-26	Lansing-KC	3560	2036	31
NW. Greenvale	Russell	Texas Co.'s Borrell 1, C N½ NE SE 32-14-12w	5-3	Arbuckle	3171	464	....
Breford	Ellsworth	Magnolia's Andrea 6, NW SW SW 7-17-10w (OTD 3106)	5-7	Quartzite	3366	24	41
Davidson	Barton	Armer et al's Peirano 1, C N½ NE NE 4-16-11w	5-14	Lansing-KC	3020	500	40.9
Stafford	Stafford	Stanolind Oil & Gas' Charles 4, C N½ SW SE 15-24-12w	5-14	Arbuckle	3694	1098	35
Vaughn	Russell	Cities Service Oil Co.'s Vaughn 6, CNl NE SW SW 17-14-14w	5-24	Pre-Cambrian	3309	831	....
Keighley	Butler	Phillips' Keighley 25, SWc NW 23-27-7e	6-21	Dolomite	3159	297	....
Ray	Phillips	Cities Service Oil Co.'s Vehige 1, SWc 28-5-20w	7-23	Arbuckle	3655	2572	32
Orth	Rice	W. L. Bartlett's Boldt 1, C S½ SW SE 22-18-10w	6-28	Shawnee	2813	15	20.6
Bowman	Rice	Sharon Drlg. Co.'s Heine 1, C W½ NW SE 21-19-10w	7-5	Arbuckle	3301	466	....
Rusch	Russell	Westgate-Greenland's Rusch 2, CWl SE NE 29-14-14w	7-12	Lansing-KC	3120	49	....
Rick	Barton	Shell Oil Co.'s Rader 1, NEc NE 11-19-11w	....	Lansing-KC	3374½	3000	36.8
Dubuque	Russell	L. T. Machall's Kluesner B-1, SE NW SW 27-15-12w	8-20	Lansing	3191	291	....
NW. Ainsworth	Barton	Continental's Herrington 1, SE NE SE 29-16-13w	10-8	Lansing	3361	366	....
Eberhardt	Barton	Vickers Pet. Co.'s "C" Kerr 1, CNl NE SE 24-19-11w	12-2	Lansing-KC	3365	3000	41.5
Lake City	Barber	Pryor & Lockhart's "C" Grant 2, CNl NE 18-31-13w	12-19	Simpson	4541	231	47.6

Kentucky

NEW FIELDS

Spring Groove	Henderson	Sun Oil & Kentucky Natural Gas' Rayburn 2, NW SE 20-0-18	11-10	Mansfield	1335-50	110	....
....	Webster	Sun Oil & Kentucky Natural Gas' Tapp 1, 13-N-32	12-20	....	928-33	25	....
Pleasant Ridge	Daviess	Willkie's Westerfield 1, 25-N-31	7	Tar Springs	840-50	30	....

North Louisiana

NEW FIELDS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
Little Creek	La Salle	Placid Oil Co.'s Goodpine B-1, 33-9n-2w	4-6	Wilcox	4122	11	43
Trout	La Salle	Scruggs & Todd's Pipes 1, 19-8n-3e	8-17	Wilcox	3626	100	35
Hemphill	La Salle	Critchett & Woods' Jones 1, 41-7n-3e	4-9	Wilcox	3963	146	38
N. Nebo	La Salle	H. L. Hunt's Goodpine C-1, 33-8n-3e	6-7	Wilcox	5001	40	34
Cypress Bayou	La Salle	H. R. Scivally et al's La. Delta 1, 12-6n-4e	6-11	Wilcox	5510	344	43
Delta Hughes	La Salle	W. R. Hughes et al's La. Delta 1, 22-8n-1e	10-12	Wilcox	4092	10M	Gas
Kelly	Caldwell	Big West Dr. Co.'s Lowe 1, 36-12n-3e	8-7	Wilcox	4009	20M	Gas
Big Slough	Catahoula	Phillips & Carter's Tensas B-1, 14-5n-5e	9-8	Wilcox	5883	154	46
Little Lake	Catahoula	Fisher & Phillips Pet.'s, Womack-Cotton 1, 12-6n-6e	11-30	Wilcox	6810	360	37
Ajax	Natchitoches	Watts Oil Co.'s Tanner 1, 18-10n-10w	2-24	Paluxy	3430	10	35
Grand Cane	De Soto	Slack et al's Cook 1, 32-13n-14w	9-20	Paluxy	2558	5	42
Lake End	Red River	Thornton & La Croix's, Prudential 1, 31-11n-9w	3-15	Nacatoch	1317	5	47

NEW PAY HORIZONS

Athens	Claiborne	Skelly Oil's Valentine 1, 31-20n-6w	4-2	Travis Peak	6158	100	55
N. Lisbon	Claiborne	Big West Drlg.'s Alford 1, 11-21n-4w	8-25	Travis Peak	5207	80	Dist.
N. Lisbon	Claiborne	Union Prod. Co.'s Meadows A-1, 18-21n-4w	....	Smackover	10395	331	56
Haynesville	Caliborne	T. L. James et al's Aiken 1, 27-23n-8w	11-28	Pettit	5801	600	39

South Louisiana

NEW FIELDS

Bayou Sale	St. Mary	Humble Oil & Rfg.'s Marin 1, 16-16s-9e	6-22	Miocene	10100-10	216	36.5
Bastian Bay	Plaquemines	Phillips Petroleum's LLE-Fee 1, 38-20s-29e	10-28	Miocene	9353-56	65	41
Belle Isle	St. Mary	Sun Oil's Belle Isle Corp. 1, 6-18s-11e	4-4	Miocene	9830-70	20	47.5
Delacroix	Plaquemines	Texas Co.'s State-Delacroix 1, 34-15s-14e	5-12	Miocene	8915-25	3.5M	Gas
Delta Duck	Plaquemines	Texas Co.'s State-Octave Pass 1, 32-20s-20e	4-27	Miocene	11370-400	195	36.1
Hayes	Calcasieu	Gulf Refg.'s Calcasieu National Bank 1, 18-11s-5w	8-31	Frio	10527-29	No gauge	Dist.
Lakeside	Cameron	Superior Oil's Calcasieu National Bank 1, 19-12s-4w	2-24	Miocene	9970-95	85	56
Lewisburg	Acadia	Stanolind Oil & Gas' Tweedel 1, 77-7s-3e	12-10	Oligocene	10140-50	211	53
Lake Chicot	St. Martin	Amerada and Phillips Petroleum's Arm of Grand Lake-State 1, 31-11s-10e	9-10	Miocene	9025-40	264	40.2
Lapyrouse	Terrebonne	Gulf Refg.'s Picou 1, 20-20s-17e	10-4	Miocene	10883-94	237	41.5
Pointe au Fer	Terrebonne	Barnsdall Oil's Nelson Development 3	10-1	Miocene	6750-60	2.5M	Gas
Pecan Lake	Cameron	Superior Oil's Miami Corp. 1-B, 29-14s-3w	5-15	Miocene	10174-84	288	46.1
Pine Prairie	Evangeline	C. & I. Production's Evangeline Land 1, 37-3s-1w	4-22	Cockfield	8189-8236	812	40.4
St. Gabriel	Iberville	Titantic Oil's Natalbany Lumber Co. 1, 7-9s-2e	2-19	Miocene	7766-76	238	30.5
Unknown Pass	Orleans	W. T. Burton's L. & N. R. R. 2, 17-11s-15e	7-12	Miocene	9865-84	366	51.4
W. Port Allen	W. Baton Rouge	Amerada Petroleum's Wilberts 1, 26-7s-11e	4-7	Marginulina	9610-20	262	36.8
Westwego	Jefferson	Titanic Oil's Marrero 1, 2-13s-23e	1-25	Miocene	9830-42	238	30.5

NEW PAY HORIZONS

Anse la Butte	St. Martin	W. R. Davis, Inc.'s Voorhies 2, 72-9s-5e	5-17	Miocene	7988-95	197	31.1
Black Bayou	Cameron	Shell Oil's Watkins 45, 6-12s-12w	7-3	Oligocene	7508-28	182	40.7
Bayou Pigeon	Iberia	Plymouth Oil's Tilley, 13-12s-10e	2-21	Miocene	8142-53	552	47
Barataria	Jefferson	California Co.'s Fleming Plantation 7-C, 15-15s-23e	5-1	Miocene	7620-52	349	37
Bayou Perot	Jefferson	Texas Co.'s State-Bayou Perot 2, 6-17s-23e	1-25	Miocene	8925-42	481	37.8
Bayou Sale	St. Mary	Atlantic Refg.'s St. Mary Parish Land Co. 1, 17-16s-9e	11-8	Miocene	10310-42	474	37.8
Bay St. Elaine	Terrebonne	Texas Co.'s State-Bay St. Elaine 7-B, 24-22s-17e	9-30	Miocene	9290-9310	252	....
Cameron Meadow	Cameron	Magnolia and Humble's Cameron Meadow 33	9-18	Miocene	1268-76	113	20.4
Chalkley	Cameron	Humble Oil & Refg.'s Hanszen 10, 9-12s-6w	2-1	Oligocene	7134-39	146	34.9
Chacahoula	Lafourche	Sun Oil's Cypress 3, 75-15s-15e	3-27	Miocene	7800-40	341	33.7
Delacroix	Plaquemines	Texas Co.'s Delacroix Island 2, 3-16s-14e	12-18	Miocene	8955-70	335	37.6
Erath	Vermilion	Phillips Petroleum's Dugas 1, 15-13s-4e	5-12	Miocene	11618-19	283	36
Erath	Vermilion	Texas Co.'s Henry Est. 1, 21-13s-4e	11-4	Miocene	8715-45	240	58
Erath	Vermilion	Phillips Petroleum's Burt 1, 20-13s-4e	11-12	Miocene	10457-62	100	56.8
Erath	Vermilion	Phillips Petroleum's Fitzsimmons 1, 20-13s-4e	9-25	Miocene	10147-50	289	58.2
Erath	Vermilion	Texas Co.'s Broussard 1, 21-13s-4e	5-20	Miocene	10601-21	96	37.9
Gueydan	Vermilion	Fohs Oil's Humble 1, 27-11s-1w	8-7	Miocene	7565-80	600	34.5
Gueydan	Vermilion	Fohs Oil's Mulvey Irrigation 2, 34-11s-1w	1-15	Miocene	9722-42	450	33.6
Gueydan	Vermilion	Fohs Oil's Mulvey Irrigation 3, 34-11s-1w	7-28	Miocene	8755-68	389	32.8
Gueydan	Vermilion	Fohs Oil's Mulvey Irrigation 4, 34-11s-1w	4-4	Miocene	4829-	129	32.2
Jennings	Acadia	Shell Oil's Conover-Community 15, 40-9s-2w	5-16	Oligocene	7690-7740	571	38
Lake Long	Lafourche	Fohs Oil's Aucoin 1, 65-17s-19e	12-7	Miocene	10218-28	415	37.6
LaFitte	Jefferson	Texas Co.'s Kerner 2, 22-17s-24e	5-25	Miocene	8270-95	236	31.5
Lake Chicot	St. Martin	Amerada Petroleum's State-Lease 411, 31-11s-10e	12-1	Miocene	8150-75	160	50
Neale	Beauregard	Atlantic Refg.'s Musser-Davis 5, 26-3s-11w	7-16	Wilcox	10880-96	431	47.7
Gibson	Terrebonne	Shell Oil and Barnsdall Oil's Realty Operators 7-B, 14-17s-15e	8-13	Miocene	8589-8621	225	35.8
Potash	Plaquemines	Humble Oil & Refg.'s Orleans Levee Board 48, 13-18s-15e	2-5	Miocene	8450-85	164	28
Raceland	Lafourche	Amerada Petroleum's South Coast Corp. 8, 34-15s-19e	8-11	Miocene	7170-80	127	37.6
S. Roanoke	Jeff Davis	Continental Oil's Jaenke 1, 24-10s-4w	2-14	Miocene	8504-20	36	60.5
University	E. Baton Rouge	William Helis and Louisiana Progress' Nelson 12, 37-7s-1w	12-30	Oligocene	9567-72	194	42.9
Vinton	Calcasieu	Union Sulphur's Gray Est. 2, 4-11s-12w	11-15	Miocene	3605-14	185	25.8
Venice	Plaquemines	Tide Water Associated's Buras Levee 9, 22-21s-30e	1-23	Miocene	10600-60	302	37.4
Venice	Plaquemines	Tide Water Associated's Buras Levee 10, 22-21s-30e	6-17	Miocene	10516-42	204	34.5
Venice	Plaquemnes	Tide Water Associated's Manhattan Land & Fruit 15, 35-21s-30e	6-20	Miocene	8126-74	275	28.4
Welsh	Jeff Davis	Union Sulphur's Arcenaux 1, 28-9s-5w	10-15	Miocene	7232-35	145	30.3
Welsh	Jeff Davis	Union Sulphur's Gray Est. 1, South Flank	5-12	Miocene	6534-40	210	40
West Bay	Plaquemines	Gulf Refining and Tide Water Associated's Buras Levee District 7-E, 35-22s-30e	11-3	Miocene	6836-40	227	34.6
West Bay	Plaquemines	Gulf Refining and Tide Water Associated's Buras Levee District 2-E, 35-22s-30e	4-29	Miocene	7286-95	211	30.5
West Bay	Plaquemines	Gulf Refining and Tide Water Associated's Buras Levee District 5-E, 35-22s-30e	10-19	Miocene	7323-35	487	34.3
West Bay	Plaquemines	Gulf Refining and Tide Water Associated's Chawee Pass 1, 36-22s-30e	3-12	Miocene	6264-74	132	31
West Bay	Plaquemines	Gulf Refining and Tide Water Associated's Chawee Pass 2, 35-22s-30e	6-4	Miocene	7135-62	615	33.2
W. Lake Verrette	St. Martin	Shell Oil's Norman-Breaux 1-B, 9-14s-12e	1-28	Miocene	7988-95	197	31.1

South Louisiana—Continued

NEW PAY HORIZONS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
White Lake	Vermilion	Union Oil of California's Louisiana Land & Fruit 4-A, 15-15s-1e	2–3	Miocene	7342–55	217	34.6
White Lake	Vermilion	Union Oil of California's Vermilion Parish School Board 1-A, 16-15s-1e	9–30	Miocene	6437–43	303	36.4
White Lake	Vermilion	Union Oil of California's Vermilion Parish School Board 1-B	2–2	Miocene	9863–74	480	37.4

Michigan

NEW FIELDS

Blue Lake	Muskegon	Welsh Oil's Cussen 1, SW SW NW 5-12n-6w	1–7	Traverse	1840	5	45
Deerfield	Isabella	Burrus & Quinlan's Winesburg 1, SE SW SW 20-14n-6w	3–19	Mich. Stray	1290–92	2.9M	Gas
Barry	Barry	Wolverine Nat. Gas' Dickerson 1, NE NE NE 4-1n-9w	5–21	Monroe	2196	0.6M	Gas
Muskrat Lake	Van Buren	Fortney Oil's Pullin 1, SW SW NW 1-1s-14w	6–2	Traverse	1285	185	46
Trowbridge	Allegan	Louis Rose Power's 1, NW NE SE 3-1n-13w	6–27	Traverse	1315	15	40.9
Headquarters	Roscommon	E. V. Hilliard's State 1 C S½ SE SE 34-21n-3w	6–26	Traverse	3440–48	6000	43
Winn	Isabella	Belvidere Oil's Pease 1, SE SE NW 21-13n-5w	6–6	Mich. Stray	1256	1.6M	Gas
Otisville	Genesee	H. H. Heinig's Dodge 1, SE SE SW 5-9n-8e	8–3	Traverse	1892	15	....
Sylvan	Osceola	Turner Pet.'s Gas Unit 1, SW NE NE 7-18n-7w	8–19	Mich. Stray	1528	2.0M	Gas
Deep River	Arenac	Don Rayburn's Ort 1, NE NE NW 20-19n-4e	8–23	Berea	1563	0.3M	Gas
W. Hopkins	Allegan	Clifford Perry's Shafrer 1, NW SE NW 18-3n-12w	9–21	Traverse	1570–74	154	44.7
Lee	Allegan	Clappsadle's Malstrom 1, NW SW NW 19-1n-15w	11–14	Traverse	1168–70	90	46
Akron	Tuscola	Smith Pet.'s Partlo 1, C E½ NE SW 28-14n-4e	11–11	Dundee	2848–67	50	40.5
Farwell	Clare	H. J. Hirzel's Oxendlae 1, SE NE SE 36-18n-5w	11–16	Dundee	3939–41	262	45.1
Evart	Osceola	Taggart Bros.' Wirth 1, S½ NE SE 22-18n-8w	12–15	Mich. Stray	1468	0.6M	Gas
Richfield	Roscommon	Sun Oil's Bauman 1, N½ SW NE 29-24n-1w	12–20	Monroe	4188–99	97	....
Albion	Calhoun	Continental Oil's Turner 1, NE S NE 15-3s-4w	12–25	Traverse	1600–09	10.6M	Gas
Calvin	Cass	S. S. Phillip's Carter 1, NE SE SE 1-7s-14w	12–27	Traverse	968	12	....

NEW PAY HORIZONS

Winterfield	Clare	Sun Oil's Thayer 1, E½ SE SW 29-20n-6w	1–24	Traverse	3156	60	46
Adams	Arenac	Don Rayburn's Fox 1, NE NE SE 21-19n-93e	6–6	Monroe	4310	21	....
Reed City	Osceola-Lake	Pure Oil's Gingrich 1, SE SE SW 30-18n-10w	5–29	Monroe	3640–43	2615	45.5
Reed City	Osceola	Pure Oil's Gingrich 4, N½ SW SW 30-18n-10w	9–24	Traverse	2938	4600	46
Salem	Allegan	Regal Dutch's Heasley 2, SE NW NE 21-4n-13w	10–6	Salina	2892	0.5M	Gas
Monitor	Bay	Gulf Ref.'s Bateson 1, S½ SE SE 2-14n-4e	11–2	Salina	7759–7800	7.7M	Gas
Monitor	Bay	United Driller's Kircher 2, NW NE NE 3-14n-4e	4–18	Berea	1518	55	....

Mississippi

NEW FIELDS

Madison	Madison	C. L. Morgan et al's Whitworth 1, 4-11n-3e	12–30	Midway	4824–33	320	35
Cary	Sharkey	British-American Oil Co.'s Houston A-1, 23-11n-7w	8–14	Midway	3200–3300	75	35

Montana

NEW FIELDS

Twin Rivers	Glacier	Ed Regan et al's Tribal 1, CWL SW NW 22-37n-7w	5–23	Madison	3835–55	6.0M	Gas
Haystack Butte	Liberty	Utilities' Montana Dakota Oswood 1, C NE SW 18-35n-4e	10–20	Colorado	2190–2240	1.5M	Gas
N. Kevin	Toole	R. G. Parrent's Holbrook 1, C SW NE 2-36n-3w	7–5	Ellis-Madison	2055–60	20	41.0

Nebraska

NEW FIELDS

Falls City	Richardson	Ohio Oil & Harry Harper's Sibbernsen 1, C N½ NE NE NW 20-1n-16e	6–14	Second Break Hunton Lime	2282	876	30.8

NEW PAY HORIZONS

N. Falls City	Richardson	Ohio Oil's Bahr 1, SE SW SE 7-1-16e	5–7	Hunton	2280	210	30
Barada	Richardson	Skelly Oil's H. Roesch 1, CN½ NW 36-3 16e	10–22	Hunton	2478	615	29.6

New Mexico

NEW FIELDS

....	Eddy	Bryant & W. A. Sudderth's N. H. Willis 1, C NW SE 14-20s-28e	8–30	Permian	830–930	3M	Gas
....	Eddy	P. B. English et al's Jones 1, C SE NE 24-19s-31e	12–	Permian	2461–70	100	32
....	Eddy	Fulton Oil Co.'s Johnson 1, NWc SE 22-19s-27e	4–23	Permian	1572–1645	3	34.6
....	Eddy	Nay Hightower et al's Grier 1, C NW NW 31-16s-31e	11–28	Permian	3067–3118	390	37.4
....	Eddy	Sanders Bros. et al's H. W. Leonard 1, C NW SW 34-16s-30e	11–9	Permian	2953–82	77	38.2
Salt Lake	Lea	Harry Leonard-Van Welch's State 1, C NW NW 18-20s-33e	7–10	Permian	3098–3103	250	26

NEW PAY HORIZONS

Maljamar	Lea	Barney Cockburn et al's State-Westall 1, C SW SW 36-17s-32e	12–31	Permian	4712–25	49	39.8

Oklahoma

NEW FIELDS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
E. Pawnee	Pawnee	Alma Oil's Hill 1-A, C N½ NW SW 1-21-5e	1-14	Misener	3369	500	42.5
N. Okemah	Okfuskee	Keener Oil & Gas' Dudgeon 1, NE SW SE 36-12-9e	1-21	Gilcrease	3113	669	35
W. Okemah	Okfuskee	Deep Rock Oil's Davis 1, SW SE SE 20-11-9e	1-22	Hunton	3986	59.5M	Dist.
N. Little River	Seminole	Delaney et al's Clark 1, NEc SE 30-8-7e	2-1	Dolomite	4289	188	41
S. Maud	Pottawatomie	Kerlyn Oil et al's Cherry 1, SE NE NW 32-8-5e	2-18	Dolmite	4325	181	40.7
W. Fish	Seminole	Hall & Weldon's Jackson 1-A, C N½ NE SE 14-7-7e	3-4	Booch	3192	44	36
Hill Top	Hughes	Magnolia Pet.'s McKay 1, SWc SE 16-5n-11e	3-4	Cromwell	5424	10.75M	Gas
Sheppard	Seminole	Alma Oil's Borden 1, NE SE NW 4-8-8e	3-11	Cromwell	3366	25	41.8
Guthrie	Logan	Sunray Oil's Donoghue 1, C NW SE 7-17-1w	3-18	Wilcox	5442	2444	47.1
.....	Pottawatomie	Grisso Roy's Royster 1, SW NW NW 33-6n-3e	3-25	Layton	2894	3.5M	Gas
Castle	Okfuskee	K. G. F. F. Oil's Camp 1, SWc 6-11-9e	3-29	Hunton	4010	195	43.5
W. Sand Springs	Tulsa	J. C. Elledge's McKee 1, NW SE NW 7-19-11e	4-8	Skinner	1425	10	33.6
Tecumseh Lake	Pottawatomie	Hall & Jordan Oil's Whitehead 1, C W½ SE SE 36-10-3e	4-22	Wilcox	5245	4047	38.5
W. Bethel	Seminole	P. J. McIntyre et al's Brown 1, SW SE NE 14-9-7e	4-23	Cromwell	3551	162	39
N. St. Louis	Pottawatomie	Amerada Pet.'s Peters 1, SW NW SE 27-8n-4e	4-26	Hunton	3935	524	38
E. Orlando	Payne	Gardner Pet. et al's Lowry 2, C N½ SE SW	5-14	Misener	4747	177	42
.....	Osage	Dunne & Miller's 2, NE SW NE 18-24n-8e	5-20	Hominy	2845	100	41
N. Castle	Okfuskee	Texas Co.'s Butcher 1, C N½ SE NW 15-12-9e	5-20	Cromwell	3323	57	41
.....	Hughes	Arrow Drlg.'s Granneman 1, SW NW SE 23-9n-11e	5-27	Booch	2336	3.0M	Gas
E. Tecumseh	Pottawatomie	J. E. Crosbie et al's Schooland 1, C E½ NE SW 16-9-4e	6-3	Viola	4652	462	34
W. Loco	Stephens	H. J. Brown's Lowery 1, NW SW NW 8-35-5w	6-3	Sandy Lime	1160	35	34
Velma, Deep	Stephens	Skelly Oil's Robberson 4, C NE NE 35-1s-5w	6-21	Bromide	7163	132	41.2
E. St. Louis	Pottawatomie	Helmrich-Payne et al's Schooland 1, NWc NE 16-7-5e	7-1	Wilcox	4419	466	37
N. Bethel	Seminole	Winona Oil et al's Heller 1, NEc 25-10-7e	7-1	Cromwell	3572	42.0M	Gas
Otoe City	Noble	Superior Oil's Faubion 1, SE SW SE 16-22n-1e	7-8	Wilcox	4925	265	41.2
.....	LeFlore	Western Oil & Gas' Ward 1, NW SW NW 27-9-24e	7-9	Cromwell	5795	12.0M	Gas
S. Dill	Okfuskee	Shell Oil's Keys B-1, SWc NE 22-11-8e	7-9	Hunton	4235	1482	40
W. Hotulke	Pottawatomie	C. W. Sharp et al's Billington 1, NW SE SE 21-9-4e	7-9	Viola	4597	500	38
W. Arno	Creek	H. F. Wilcox O. & G. et al's Deere 1, 34-14-7e	7-11	Wilcox	4021	110	42
Navina	Logan	Continental Oil et al's Leninger 1, SW SE SW 17-15-3w	7-15	Wilcox	6255	192	37
Harper	Oklahoma	Harper-Turner's Kunc 1, NW SW NW 33-14-3w	7-17	Hunton	5770	24	39
N. Davenport	Lincoln	Dunnett Oil's Luckenbill 1, SW SE SE 29-15-5e	7-22	Prue	3548	43	41
.....	Lincoln	Allied Materials Corp. et al's Hicks 1, NWc 25-13n-6e	8-11	Wilcox	4312	6.7M	Gas
.....	Osage	Ohio Osage's Osage 1, C E½ E½ NW 32-22n-9e	8-17	Bartlesville	2250	4.25M	Gas
Rusk	Okfuskee	C. B. Malernee's Beard 1, SE SW NE 7-11n-8e	8-18	Cromwell	3691	624	38
NE. Wewoka	Okfuskee	Hall & Jordan et al's Jennings 1, CN½ SE SE 8-8-8e	8-26	Hunton	2981	95	36
S. Castle	Okfuskee	Shell Oil's Heffner 1, SE NW NW 17-11-9e	9-14	Hunton	3900	427	43
.....	Seminole	Keener Oil & Gas' Homestake 1, SW SW NW 28-7n-7e	9-16	Senora	2138	25	41
.....	Caddo	Texas' Smith 2, C SE NW 2-5n-12w	9-16	Bromide	3433	1434	39
.....	Pontotoc	Blackwell Oil & Gas' Riddle 1, NW NW NE 9-3n-5e	9-21	Miss	1540	11M	G-s
.....	Osage	Joseph Swartz' 3-A, SW SW NE 16-23n-9e	9-29	Bart	2163	6	....
.....	Carter	L. Saunders' Harmon 1-A, NE SE SW 21-1s-2w	9-30	Sand	309	2M	Gas
.....	Love	J. S. Batson et al's Conrad 1, C NE NW NW 34-6s-2e	10-2	Viola	2592	20	40
.....	Stephens	Carl Carters' Peek 1, NE SE NE 1-3s-6w	10-11	Sand	436	9.68M	Gas
.....	Lincoln	Mid-Continent's Evans Land Co. 1, SW SE NE 31-14n-6e	10-19	Hunton	4565	114	43
N. Boston	Osage	Devonian's Osage 1-A, SW SW NE 34-22n-7e	10-23	Hominy	3065	200	83.5
N. Bearden	Okfuskee	Shell's Palmer 1, SW NW SW 6-10n-9e	10-27	Booch	3153	34	35
.....	Seminole	Domar Oil's Smith 1, SE SE NE 29-8n-8e	11-3	Hunton	4590	70	41.8
Sylvian	Seminole	Stanolind-Amerada's Buck 1, NW SE NW 11-10n-7e	11-7	Wilcox	4400	90	34
.....	Lincoln	Big Chief's Barrett 1, S½ SW NE 20-13n-6e	11-23	Sylvan	4449	13.0M	Gas
.....	Okfuskee	John Droppleman's Wahola 1, NE NE SW 15-11n-10e	12-3	Wilcox	3170	3.5M	Gas
Stroud-Arno	Creek	Deep Rock et al's Meadors 1, SW NW NE 16-15n-7e	12-10	Wilcox	398	85	40
Hooker	Texas	Peerless O. & G.'s Hopkins 1, S½ NW NE 7-4n-18ecm	12-17	Dolomite	2900	5.5M	Gas

NEW PAY HORIZONS

SE. Braman	Kay	Tide Water's State No. 2 CE½ W½ SW 16-28n-1w	1-2	Arbuckle	3665	475	....
Byars	McClain	Patsy Oil's Bond 1, NW NE NE 16-5n-3e	2-18	Layton	2635	62	....
Dilworth	Kay	National Union O. & G. Co.'s Long 1, NWc 29-28n-3e	3-4	Wilcox	3377	83	....
Fish	Seminole	Mid-Continent Pet.'s Ferguson 2, NE NW NW 19-7n-8e	3-18	Calvin	3491	335	29
E. Stroud	Creek	Lewis Prod.'s Jones 1, NW NE SW 32-15n-7e	4-1	Prue	2850	105	45
W. Arno	Creek	Bryan Pet. et al's Deere 1, NE SE NE 34-14n-7e	4-22	Wilcox	4020	60	32
NE. Wewoka	Seminole	Magnolia's Davis 1, SW SE NE 16-8n-8e	4-29	Hunton	4282	20	38
E. Cromwell	Okfuskee	Shell Oil's Smith 1, SW SE SW 26-11n-8e	5-13	Wilcox	4237	145	37
W. Arno	Creek	Wilcox O. & G. Co.'s Stephney 1, NE NW SW 35-14n-7e	5-20	Red Fork	2940	100	42.5
S. Cromwell	Seminole	Sinclair Prairie Oil's Yahola 1, SWc NW 28-10n-8e	5-21	Wapanucka-Cromwell	3600	87	39
Centrahoma	Coal	Ramsey Pet.'s Harryman 1-A, NW SE NW 27-2n-9e	5-27	McAlester Sd	1340	10.6M	Gas
N. Little River	Seminole	W. A. Delaney's Harjo 1-A, SW NE SE NW 30-8n-7e	5-27	Hunton	4170	552	40
Velma	Stephens	Skelly Oil et al's Frensley 4, C NE NE 35-1s-5w	7-1	Bromide	7580	132	41
E. Cromwell	Okfuskee	Shell Oil's Curry B-1, SE SW SW 26-11n-8e	7-28	Hunton	4045	2000	37
W. Arno	Creek	Wilcox O. & G. Co.'s Soaktey 1, SE SW SW 26-14n-7e	7-29	Bartlesville	3235	50	38
E. Wetumka	Hughes	Potco Oil Corp.'s Morrison 1, NW SE SW 13-9n-10e	8-12	Hunton	8761	1480	44
W. Hotulke	Pottawatomie	Atlantic's Higbee 1, SE NW SW 22-9n-4e	8-26	Wilcox	4646	525	27.6
Guthrie	Logan	Sunray et al's McLeod 1, NE NE SE 12-17-2w	9-23	Bartlesville	5175	120	39.3
W. Hewitt	Carter	Gibson & Jenning's Hoover 4, NE SW SE 20-4s-2w	11-4	Viola	2990	90	35.4
Cumberland	Marshall	Pure's Thompson 2, NE NW NE 33-5s-7e	11-18	McLish	5756	494	....
Castle	Okfuskee	Chapman & McFarland's Deathridge 1, SE NE SE 1-10-8e	12-2	Booch	3004	95	....

East Texas

NEW FIELDS

.....	Angelina	S. D. McDaniel et al's Bonner 1, 1726 Ft. from NE and 655 Ft. from SE lines 100-ac. tr., Sarah O'Dell sur.	8-8	Wilcox	1225	1	....
Tri-Cities	Henderson	British-American Oil's Young 1, 660 Ft. out of SWc 490-ac. tr., Jos. Rice sur	11-14	Rodessa	7624-41	355	61
Lovelady	Houston	C. P. Culmore-Ed A. Gillespie et al's G. T. Lundy 1, 467 Ft. out of SEc of NE 40-ac. of 310-ac. tr., John Forbes sur.	12-	Wilcox	3215-20	156	27
Pleasant Grove	Rusk	L. O. McMillan et al's (was Ross Sears-A. O. Phillips') Pool 1, 467 Ft. out of SEc of 71-ac. tr., Geo. May sur	5-18	Woodbine	4054-62	215	38
New Salem	Rusk	O. W. Killam et al's Bass 1, 758 Ft. from W and 467 Ft. from S lines 140-ac. Lse., J. I. Sanchez sur. (Pb. from 4372)	12-30	Nacatoch	2910-65	215	35-36

East Texas—Continued

NEW PAY HORIZONS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
Willow Springs	Gregg	Humble & Gulf's Horton & Dickson 2, 700 Ft. E of Sabine River and 650 Ft. S of S bank, H. Frost sur. (1st oil well)	6-26	Pettit	7255-91	60	38.7
Willow Springs	Gregg	Lone Star Gasoline Co. & Roger Lacy's Horton-Dickson 1, 675 Ft. W and 1200 Ft. N of SEc of J. L. T. Meredith sur.	9-25	Rodessa	6490-6770	60M	Gas
Barron	Limestone	Bert F. Weekley et al's Barron 2-A, 660 Ft. from NE and NW lines E. Mabry sur. (1st oil well)	11-21	Pettit	5685-5785	25	42
Hawkins	Wood	Humble's E. Dagnell 1, 467 Ft. from W and 467 Ft. from M/W/S lines 141.47-ac. tr., Willis Parker sur	5-20	Sub-Clarksville	4057-73	9.8M	Gas

Texas Gulf Coast

NEW FIELDS

Big Hill	Jefferson	Stanolind's George Anderson 1, T. N. O. sec. 173	12-24	Oligocene	8705-20	15	Gas
Chenango	Brazoria	J. Newton Rayzor's Christian 1, Wm. Parker sur	1-27	Frio	8566-73	453	37.7
Clodine	Fort Bend	Providence Oil Co.'s Hatfield 1, H. D. Brown sur	6-19	Cockfield	7499-7502	107	51.2
E. Goodrich	Polk	Pan American's Texas Long Leaf 1, A. Viesca 7-League gr	11-14	Cockfield	4030-34	112	34.2
Fostoria	Montgomery	Atlantic's Foster Lumber Co. 1, P. Gill sur	12-28	Cockfield	5790-94	Pumping	39
Fred	Tyler	Stanolind, Republic, Houston Oil's James F. Parker 1, G. T. W. Collins sur	10-28	Wilcox	8180-8200	218	39.5
Hall's Bayou	Brazoria	Strake Petroleum's Griffith 1, H. P. Cayce sur	6-1	Frio	10410	456	47.5
Lakeview	Wharton	W. R. Davis' Hartman 1, I. G. N. sur. sec. 10	5-29	Miocene	3400-11	0.1	Gas
Lucky	Matagorda	Stanolind's Huebner 1, Elisha Hall sur	3-21	Frio	8883-86	75	39
Lake Creek	Montgomery	Superior's McWhorter 1, T. J. Nichols sur	2-24	Wilcox	9212-17	130	61
Magnolia	Montgomery	Glenn H. McCarthy's Seyle 1, John Scott sur	10-8	Wilcox	8448-58	87	57.7
Needville	Fort Bend	W. L. Goldston's Coyle 1, H. T. C. sur., sec. 39	10-9	Frio	5176-80	Shut in	Gas
NE Nash Dome	Fort Bend	Atlantic's Kittie Nash Groce 2, T. Alsbury sur	12-29	Miocene	4294-4312	180	19
Oyster Bayou	Chambers	Sun's Jackson 3, sec. 126	4-23	Frio	8250-80	666	35.9
Sabine Pass	Jefferson	Hall-Jordan & British American's State-Gulf 1-71	3-30	Miocene	4982-92	291	26.7
Stowell	Jefferson	Glenn H. McCarthy's Crawford 1, T. N. O. sur., sec. 158	12-10	Frio	8850-80	483	34.5
W. Conroe	Montgomery	Housh & Thompson's Clary 2, W. S. Allen sur	6-15	Cockfield	4728-34	35	36
W. Silsbee	Hardin	Republic Production's Elliott 1, F. P. Elliott League	4-8	Cockfield	6918-23	206	40.8

NEW PAY HORIZONS

Blue Ridge	Fort Bend	G. J. Lee & Son's Luscher 2, T. Habermacher sur	5-28	Miocene	3405-18	100	23.2
Chocolate Bayou	Brazoria	Phillips Petroleum's Houston Farms 1, sec. 7	1-14	Frio	9675-77	283	54.8
Danbury	Brazoria	Rowan Drilling Co.'s Jamison 13, Henry Austin sur	8-13	Miocene	3415-28	404	24
Dyersdale	Harris	J. W. Frazier's Dwyer 2, Whitney Britton sur	5-22	Miocene	3480-84	273	22.6
Fig Ridge	Chambers	Sun Oil's Meckelburg Unit 2, D. L. Broussard sur	6-4	Frio	8795-8812	3.5	G. & D.
Fisher's Reef	Chambers	Humble Oil & Refining's State-Bay 10-C, sec. 46	6-4	Frio	8753	173	35.8
Hull	Liberty	South Oil's Merchant 1-C, Jesse Devore sur	5-22	Yegua	6147	518	35.4
Hull	Liberty	Houston Production's Heimple 1-A, Terrance Trahan sur	8-26	Yegua	6788	392	37.2
Hull	Liberty	Texas Co's Armelin Fee 3, S. W. Wickleff sur	12-8	Yegua	5815-75	625	36.3
League City	Galveston	Phillips Petroleum's Herrick & Martin 1, S. F. Austin sur. Abstract 3	3-5	Frio	10620-25	338	41.8
Lucky	Matagorda	Stanolind Oil & Gas' Thompson 1, Elisha Hall sur	11-21	Frio	7874-80	181	38
N. Markham	Matagorda	Sun Oil's Braman 2, Thomas Cayce sur	6-6	Frio	6962-70	158	36.9
Red Fish Reef	Chambers	Humble Oil & Refining's State-Galveston Bay 8-A, sec. 223	3-4	Frio	9307-12	60	44.1
W. Columbia	Brazoria	S. W. Richardson's Holmes 2, George Tennille sur	5-20	Frio	8244-50	167	58.6

North Texas

NEW FIELDS

	Archer	Clark et al's Parsons 1, 660 Ft. from N and 150 Ft. from W lines Blk. 3, W. E. Robert sub div. Meade Pasture Sur	12-3	Cisco	1429-39	10	36
	Archer	Deep Oil Dev. Co-Snoddy Bros' C. E. Carter 1, 1300 Ft. from N and 800 Fr. from E lines Sec. 38, Blk. 5, Clark-Plumb sur.	7-23	Cisco	815-21	5	35
	Archer	W. B. Hamilton et al's L. Cartwright 22, 660 Ft. out SWc Jas. Webb sur. A-664	8-20	Basal Penn	5148-64	16	38
	Archer	King Oil et al's Taylor 1, 1111 Ft. from N and 1377 Ft. from E lines Lot 1, ATNCL Sec. 13	4-8	Mississippi	4920-44	15	37
	Archer	Jack Storey Jr. et al's L. F. Wilson 1, NEc Lot 4, ATNCL Sec. 86	3-10	Cisco	1543-50	88	38
Cowan	Baylor	British-American Oil Producing's Cowan 1, SEc T&NO Sec. 102, A-1311	2-12	Canyon	2537-47	58	34
Patrick	Clay	Akin-Dimock-Costley's Patrick 1, 1418 Ft. from S and 649 Ft. from E lines Blk. 82, Byers Subdiv.	2-12	Cisco	1101-08	20	38
Neb-Tex	Clay	Bridwell Oil's W. H. Myers 2, 3350 Ft. from W and 2185 Ft. from N lines C. Thompson sur. A-444	6-10	Bend	5780-96	600	45
Burns-Wynn	Clay	L. T. Burns et al's C. L. Wynn 1, 330 Ft. from E and 990 Ft. from S lines Blk. 34, H. Williams sur. A-704	8-30	Mississippi	5905-67	608	44
Spring	Clay	Continental Oil's E. Spring 1, 200 Ft. from N and 1254 Ft. from W lines H&TC sec 24, Blk. 4	12-17	Bend	5587-5630	431	48
New York	Clay	Shell Oil's E. D. Coleman 1-A, 252 Ft. from N and 467 Ft. from E lines Blk. 24, Calhoun CSL sur. A-80	4-1	Mississippi	6158-6283	1104	47
	Cooke	J. L. Anderson et al's A. L. Osburn 1, 491 Ft. from N and 330 Ft. from E Lines B. Sullivan sur. A-581	10-22	Strawn	2309-16	14	42
Wilson	Cooke	Clair H. Gannon and Harvey Drl. Co.'s Ware-Wilson 1, 330 Ft. from E and 660 Ft. from S lines 68-ac tr., W. W. Crisp sur. A-221	7-7	Strawn	2219-27	72	38
Bindel	Cooke	Texas Co.'s Peter Bindel 1, 1530 Ft. from N and 330 Ft. from W lines Lse., Francis Hughes sur. Lot 1, A-439	3-27	Strawn	1885-96	234	38
	Haskell	Ed C. Lawson et al's C. C. Rose-Amerada 1, 489 Ft. from M/S/S and 440 Ft. from M/W/E lines of 393-ac Tr., J. M. Cass sur. No. 57	12-	Canyon	2663-85	257	39
	Jack	Alma Oil's Maxey 1, 300 Ft. from W and 255 Ft. from N lines W½ S.P.Ry. Sec. 2, A-2233	11-24	Mississippi	5278-5384	13	42

North Texas — Continued

NEW FIELDS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
.....	Jack.....	Rathke Oil Co. and R. C. Parker's Mosely 1, 480 Ft. out of M/E/NEc of John Harrison sur. A-259.....	2-18	Bend.....	4498-4510	2.2M	Gas
Hoefle.....	Jack.....	Taubert-McKee and Sinclair Prairie Oil Co.'s M. Hoefle 1, 934 Ft. from S and 467 Ft. from W lines of Asbury James sur. A-318.....	10-14	Bend.....	4817-35	2424	43
Chapman-Mc-Farlin.....	Montague...	J. A. Chapman-McFarlin-Deep Oil Dev. Co.-Bridwell Oil's M. Fowler 1, 330 Ft. out of M/N/SEc of J. W. Massie sur. A-463 (Pb. from 6008).....	11-5	Strawn.....	4826-62	912	44.7
Stoneburg.....	Montague...	Continental Oil's A. R. Winder 1, 467 Ft. out NEc of S-60-ac. of N-100- ac. of W-160-ac. Sec. 4, Limestone CSL sur.....	12-15	Bend.....	6234-45	464	44.8
Gant-Turne.....	Montague...	Walter H. Gant et al's John Turner 1, 330 Ft. out of NEc E. T. Ry. Sec. 59, A-253.....	10-19	Bend.....	6223-38	424	41.5
Roxye.....	Montague...	Gibson & Jennings, Inc.'s R. Howard 4, 467 Ft. from N and 1401 Ft. from E lines sec. 90, Kaufman CSL sur.....	8-27	Strawn.....	3930-40	187	43
.....	Montague...	Shell Oil's A. M. Thomas 1, 467 Ft. from S and 1255 Ft. from W lines sec. 95, Kaufman CSL sur.....	9-1	Strawn.....	3023-45	64	28
Clingingsmith....	Montague...	Sinclair Prairie's Clingingsmith 1, 467 Ft. out SWc Blk. 149, J. Olabarri sur. A-149.....	4-30	Bend.....	6119-31	1166	41.3
.....	Throck-morton....	Jack Bell et al's Housley 1, 660 Ft. out of SWc Blk. 28, Comanche Indian Reserve.....	1-15	Cisco.....	705-07	15	....
McKnight.....	Throck-morton....	Humble's J. N. McKnight 1, 1000 Ft. from N and 660 Ft. from E lines sec. 2, Day L&C Co. sur. A-1264.....	3-24	Bend.....	4023-49	1248	40
.....	Wichita.....	Ted A. Norwood et al's L. Leissler 2, 150 Ft. out of NWc C. T. Ry. sec. 1, Blk. A-48.....	6-4	Cisco.....	1298-1305	15	37
.....	Wichita.....	Paul H. Sisk et al's L. A. Sisk 2, Blk. 15, League 2, Denton CSL sur.....	11-5	Cisco.....	98-100	4	....
Burns-Larimore...	Young.....	L. T. Burns et al's E. J. Larimore 1-A, 500 Ft. out of NWc of E-200-acres of TE&L sec. 150.....	4-19	Mississippi.....	4897-4927	1798	46
Burns-Ragland....	Young.....	L. T. Burns et al's Paul Ragland 1, 467 Ft. out NEc W½ TE&L sec. 257 (Pb. from 5029).....	8-7	Bend.....	3987-4020	1288	41
New Castle.....	Young.....	R. P. Dorian & Mitchell's Mrs. K. Grigsby 1, 330 Ft. out of NWc S½ TE&L sec. 416.....	3-10	Bend.....	3974-87	423	41
.....	Young.....	Goble-Moore-Ben H. Rankin's Logan 1, 1121 Ft. From N and 467 Ft. from E lines sec. 2, J. W. Duty-J. Poitevent sur. A-1831	5-21	Marble Falls....	4488-4502	8	40
.....	Young.....	D. P. Holland et al's S. A. Morris 1, 750 Ft. from SEc W½ TE&L sec. 254.....	7-21	Cisco.....	702-12	6	36
.....	Young.....	Kerlyn Oil Co.-Phillips Pet. Co.'s Garvey 1, 2353 Ft. from E and 947 Ft. from N lines sec. 4, G&BN Co. A-119 (Pb. from 5441).....	12-30	Bend.....	4280-4310	318	43.7
.....	Young.....	Kerlyn Oil Co.-Phillips Pet. Co.'s Hazelton 1, 1655 Ft. from N and 467 Ft. from W lines TE&L sec. 1995 (Pb. from 4615).	10-8	Strawn.....	3384-95	18	41
Kerlyn-Taylor....	Young.....	Kerlyn Oil Co.-Phillips Pet. Co.'s E. Taylor 1, 990 Ft. from S and 660 Ft. from E lines NW¼ sec. 2, BS&F Ry.-J. A. Holt sur. A-2265.....	10-15	Bend.....	4255-65	697	44
.....	Young.....	E. L. Orr et al's Pace-Strange (Webb) 1, 150 Ft. from S and 1135 Ft. from E lines Lot 5, A. Rohus sur.....	8-20	Cisco.....	690-703	3	36
Allar.....	Young.....	Panhandle Refg. Co.'s Allar-Co.-Hunt 1, 467 Ft. S&W of SEc G. N. Smith sur. but in TE&L sec. 3409.....	9-15	Strawn.....	2706-11	76	38
		NEW PAY HORIZONS					
Scotland.....	Archer.....	Shell Oil's Coleman 4-A, 990 Ft. out of NWc Lot 3, ATNCL sec. 74.....	10-8	Mississippi.....	5550-60	3793	44
Scotland.....	Archer.....	Southern Pet. Exploration Inc.'s, Wilson 2, 330 Ft. from S 660 Ft. from W lines Lot 2, ATNCL sec. 73.....	7-15	Strawn.....	4016-32	119	41
K-M-A.....	Archer.....	C. H. Staley et al's Mangold 22, 1040 Ft. from W line Blk. 30, P. Castleman sur. twin to No. 20.....	11-19	Cisco.....	1727-35	144	41
Burns-Browning...	Clay.....	L. T. Burns et al's Southerland 1, 330 Ft. out of NEc of W-100-ac., Blk. 63, J. H. Belcher sur.....	6-3	Upper Strawn..	3791-3806	485	44
.....	Clay.....	Geo. Golden et al's 1st Texas Jt. Stock Bank 2, 900 Ft. from E and 450 Ft. from SW lines Blk. 9, Thornberry Subdiv.....	1-29	Cisco.....	334-338	3	40
Antelope.....	Clay.....	Shell Oil's H. Henderson 9-C, 990 Ft. from W and 1482 Ft. from N lines TE&L sec. 2605.....	5-18	Mississippi.....	5715-60	F3200	43
Antelope.....	Clay.....	Shell Oil's Mullens 7-C, 330 Ft. from E and 1482 Ft. from N lines TE&L sec. 2604 (Pb. from 6168).....	12-23	Bend.....	5451-80	54	40
Wilson.....	Cooke.....	Burk Royalty's Wilson 1, 1600 Ft. S and 330 Ft. W of NWc W. W. Crisp sur., but in A. C. Bailey sur. A-44.....	8-20	Strawn.....	2065-86	15	38
Wilson.....	Cooke.....	Harvey Bros. Drlg. et al's Wilson 1, 1820 Ft. S and 250 Ft. W of M/N/NEc W. W. Crisp sur. A-221.....	8-25	Strawn.....	2355-78	96	38
Bindel.....	Cooke.....	Texas Co.'s J. Fleitman 1, 1580 Ft. from N and 330 Ft. from E lines of W. Simpson sur. A-966.....	5-28	Ellenberger.....	3242-47	504	34.7
Myers.....	Jack.....	Elmore Oil's C. A. Myers 1, 660 Ft. from E and 1480 Ft. from S lines of N. F. Rudmose sur. A-1803.....	9-2	Strawn.....	2386-89	220	38
Gillespie.....	Jack.....	Harper-Knappenberger-Steed's Loving 4, NE NW NW TE&L sec. 3346.....	7-30	Lower Strawn..	3277-86	176	38
.....	Jack.....	Paul Steed et al's T. J. Dunlop 1, 467 Ft. from N and 620 Ft. from E lines BS&F Ry. sur. No. 3, A-81.....	7-1	Lower Strawn..	3241-57	24	43
Hott.....	Montague...	Lesh & McCall's C. L. Davenport 5, 164 Ft. from N and 200 Ft. from W. lines W-70-ac. Lse., J. Fitch sur. A-277.....	8-25	Lower Strawn..	2479-84	250	39.5
Benton-Holmes...	Montague...	United Prod. Co.-Continental Oil's Custers 2-B, 990 Ft. from S and 330 Ft. from E of 71.2-ac. Tr., Jas. McKnight sur....	2-18	Upper Strawn..	2282-90	648	39
South Electra.....	Wichita.....	Magnolia Pet.'s Burnett-Gladiolus 79, 1420 Ft. from W and 148 Ft. from S lines HT&B Ry. sec. 6, A-428.....	7-13	Ellenberger.....	3626-35	860	42
Harrold.....	Wilbarger...	Big Six Oil's Cochran 1, 330 Ft. N & E of SEc sec. 3, Blk. 14, but in MK&T Ry. sur. A-1891.....	4-4	Canyon.....	3271-81	915	40
Harrold.....	Wilbarger...	Big Six Oil's Schlaffke 1, SWc SW SE H&TC sec. 3, Blk. 14...	4-20	Landreth (Canyon).....	3169-82	122	40
Consolidated.....	Wilbarger...	Consolidated Oil et al's Ancell 4-B, NWc NW NE H&TC sec. 2, Blk. 7.....	7-1	Ellenberger.....	4369-81	306	43
Electra.....	Wilbarger...	Magnolia Pet.'s Waggoner-H&TC 65, 2100 Ft. from N 250 Ft. from W lines H&TC sec. 15, Blk. 13.....	6-7	Ellenberger.....	2997-3007	167	41
Consolidated.....	Wilbarger...	J. A. Woods & Sons' M. L. Womack 10, 430 Ft. from W and 1650 Ft. from S lines H&TC sec. 1, Blk. 7.....	3-16	Cisco (Dyson)...	1778-81	60	37
.....	Young.....	Anzac Oil's M. K. Graham-Morrison 1, 1400 Ft. out of NWc of A. E. Gossett sur. A-1802.....	9-24	Mississippi.....	4432-79	85	40
Burns-Larimore...	Young.....	L. T. Burns et al's Larimore 1-A, 500 Ft. out of NWc of E-200-ac. of TE&L sec. 150.....	4-19	Mississippi.....	4897-4927	1798	46
Sewell.....	Young.....	Carey & Carey's J. C. Vaughn 3, 6025 Ft. from E and 1000 Ft. from N lines R. W. Nabors sur. A-213.....	3-21	Strawn.....	2474-80	466	42
New Castle.....	Young.....	R. P. Dorian & Mitchell's Daniels 1, 330 Ft. out of SWc TE&L sec. 421.....	7-22	Marble Falls....	4408-35	1026	....
Williamson.....	Young.....	Thos. D. Humphrey et al's Williamson 1, SEc SE NE TE&L sec. 601.....	7-9	Mississippi.....	5000-35	896	45
Williamson.....	Young.....	Thos. D. Humphrey et al's Williamson 1-A, NWc SW¼ TE&L sec. 300.....	10-1	Bend.....	3968-78	98	42
Kerlyn-Loving....	Young.....	Kerlyn Oil Co.-Phillips Pet.'s McClure 1, 1701 Ft. from W and 425 Ft. from S lines TE&L sec. 1952.....	12-12	Bend.....	4049-75	624	41

Southwest Texas

NEW FIELDS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
Elgin	Bastrop	Marts & Beaven's Walker 1-A, G. Glasscock sur	4-8	Austin Chalk	2650-2920	104	36.8
Lentz	Bastrop	Furlong & Thompson's Lentz 1, J. G. Lentz sur	7-15	Dale Lime	2226-44	496	36.8
Genevieve	Bee	Daugherty's Hicks 7, J. M. Uranga gr	3-3	Pettus	4169-78	26	54
Caloma Creek	Calhoun	McSpadden's Clark et al 1-A, T. Hennessee sur	1-11	Miocene	5887-5910	107	53.7
Steamboat Pass	Calhoun	Gulfboard's State of Texas 1 (177), Tr. 177, S.A. Bay	5-1	Miocene	2880-2922	15M	Gas
Carrizo	Dimmitt	Producers of Nev's McKnight-Bennett 1, G. W. T. & P. sur. 653	1-25	Navarro	2294½-98	76	30
Sullivan*	Dimmitt	Wellington of Dela's Sullivan 1-B, S. P. Ry. Co., sur. 602	11-30	Navarro	1084-91	1M	Gas
E. Benavides	Duval	Hiawatha's Parr 1-A, San Andres gr	7-21	Jackson	4915-40	169	43
Agua Preita	Duval	Thomas Est.'s Parr 1, J. Adams sur. 11	4-13	Pettus	4708-20	52	48
Rios	Duval	Argo's Gonzales 1, Carrero gr	7-27	Hockley	6270-6308	34	51.2
Coquat-Lopez*	Duval	Coquat's Lopez 1, sur. 455	12-29	Jackson	1693-1705	...	20.6
Navidad	Jackson	Boyle, Mayo & Wright's Terrell 1, Murphy sur	2-26	Catahoula	3784-3806	0.1M	G. & D.
Maurbro	Jackson	Humble's Mauritz 1-B, B. J. White lge	2-11	Marginulina	5207-35	526	24.4
N. La Ward	Jackson	Moore & Ahern et al's Burditt 1, Young sur. 3	9-26	Marginulina	5202-26	122	25.8
Chaparosa	Jim Hogg	Neuhaus & Lucky's Bute et al 2, El Randado gr	5-17	Jackson	2855-68	20M	Gas
Sun-Jones*	Jim Hogg	Sun's Jones 1, Agua Nueve de Abajo gr	12-8	Jackson	4211-68	1M	G. & D.
Palacios*	Jim Hogg	Bidrich's Palacios 1, sec. 287	9-18	Yegua	2924-39	1.5M	G. & D.
Ramirez*	Jim Hogg	Forest's Ramirez et al 1, I. & G. N. sur. 271	3-31	Jackson	1992-2006	10M	Gas
Haldeman	Jim Wells	Magnolia's Seeligson-Unit 4, 1, sec. 68	4-25	Frio	5019-40	106	40.3
W. Alfred	Jim Wells	Wilcox & Howeth's R. Adams 1, R. Adams sur. 6	8-4	Frio	4194-4206	147	47.4
Brushy Creek	Lavaca	Shell's McManus 1, C. P. Delmas ½-lge	11-2	Wilcox	PBTD 7758	180	59
Vienna	Lavaca	McMurrey's Allen et al 1, M. Muldoon sur	2-2	Wilcox	8463-8506	150	50
S. White Creek	Live Oak	Stelzig et al's Everett et al 1, Lot 3408, Blk. 72	10-1	Jackson	1846-56	552	20
S. Compana	McMullen	Argo's Edrington Est. 1-I, A. B. & M. sur. 61	7-21	Pettus	3012-23	157	22.8
N. Banquette*	Nueces	Osborn-Midcontinent's Bufow 1, V. L. de Herrera gr	4-22	Frio	6705-14	12	58.6
Woodsboro	Refugio	Southern Minerals' Wood et al 1, A Reojas sur	3-22	Frio	5904-08	55	40
Yturria	Starr	Sun's Yturria L. & L. S. Co. 1, Porc. 100	9-22	Frio	4232-48	14	43.3
Floresville	Wilson	Baker's Myers 1, H. J. Arrocha sur	9-8	Reklaw	633-37½	5	18
Lovernia	Wilson	Suttle's Huebinger 1, F. Flau sur. 9	3-17	Taylor	1710-45	16½	32

* Fields not officially named. G. & D.—Gas and Distillate.

NEW PAY HORIZONS

St. Charles	Aransas	Continental's St. Charles 3, Blassman sur. 199	4-28	Frio	9295-9322	90	55
Heard	Bee	Heyser, Heard & Clardy's Heard 1, Tool sur	8-10	Vicksburg	4726-73	35	52
Kelsey	Brooks	Humble's McGill 78, G. C. & S. F. sur. 719	10-3	Frio	4938-69	166	45.5
Garwood	Colorado	Davis & Co.'s Brownson 1-A, Wooley sur	1-31	Wilcox	9423-35	83	52.4
Sheridan	Colorado	Shell's Plow Realty 3, Winn sur	4-19	Wilcox	8746-56	144	55.4
Government Wells	Duval	Sun's Wiederkehr 75, J. Poitevent sur	11-28	Yegua	2936-40	86	36.2
Hoffman	Duval	Cox & Hamon's Cuellar 4, C. & M. sur. 123	...	...	...	80	26
Labbe	Duval	Butler-Cartter-Douglas' Labbe et al 3, I. & G. N. sur. 2	11-4	Frio	1872-1902	0.75M	spray oil
N. Sweden	Duval	Hiawatha's Parr 30, San Andres gr	3-19	Yegua	5584-94	16	56
N. Sweden	Duval	Hiawatha's Parr 31, San Andres gr	4-28	Yegua	5721-49	47	65
Sejita	Duval	Trinity's Casey 2, Ramirez gr	9-30	Hockley	5771-5831	55M	54
Sejita	Duval	Trinity's Yzaguirre et al 1, Ramirez gr	10-25	Hockley	5375-95	50M	55
Sweden	Duval	Hiawatha's Herberger et al 6, sec. 25	10-26	Jackson	4929-39	118	45
Hard's Creek	Goliad	Brown & Wheeler's Kauffman 3-C, Sutherland sur	12-6	Frio	1990-2005	2.5M	Gas
McAllen	Hidalgo	Davis, Inc.'s Ariz. & Tex. Citrus 1, Lot 1, Blk. 8	8-24	Frio	7520-50	21.5M	52.4
Nichols	Hidalgo	Baldridge & King's Yturria T. & I. Co. 2, Porc. 43	2-13	Frio	3869-75	88	37.7
Nichols	Hidalgo	Baldridge & King's Yturria T. & I. Co. 1-C, Porc. 43	3-14	Frio	3670-78	88	34.7
Nichols	Hidalgo	Baldridge & King's Yturria T. & I. Co. 2-C, Porc. 43	5-9	Frio	3904-12	116	37.6
Ganado	Jackson	Texas Co.'s Silliman 1, Morris & Cummings sur. 3	3-1	Frio	6468-83	355	35.1
Lolita	Jackson	Magnolia's Mitchell 24, Austin 2-lge. gr	9-7	Frio	5820-32	2.2M	55
Navidad	Jackson	Boyle's Whitley et al 1, Keller lge	10-28	Frio	4053-70	35M	Gas
Texana	Jackson	Sinclair Prairie's Volkmer 1, Wells lge	8-27	Marginulina	5102-22	177	25.1
W. Ganado	Jackson	Pure's Spacek 3, Menefee sur	6-14	Marginulina	4755-75	102	26
W. Ganado	Jackson	Pure's Cravens 2, Menefee sur	8-5	Frio	5453-80	111	25.9
W. Ganado	Jackson	Pure's Havron 1, Rogers sur	2-28	Frio	5995-6005	3M	53.5
W. Ganado	Jackson	Pure's Spacek 2, Menefee sur	4-28	Frio	5874-98	168	32.4
Chaparosa	Jim Hogg	Neuhaus, Adams & Lucky's Gallagher 2, El Randado gr	6-2	Jackson	2781-92	2.5M	Gas
La Gloria (1)	Jim Wells	La Gloria's Alby 1, Lot 2, Blk. 9	1-19	Frio	6180-6205	80M	55
La Gloria (1)	Jim Wells	La Gloria's Scott 1, Lot 1, Blk. 9	4-15	Frio	5920-50	80M	55
La Gloria (1)	Jim Wells	La Gloria's La Gloria 14, Lot 7, Blk. 9	7-7	Frio	6790-6820	60M	55
La Gloria	Jim Wells	Magnolia's Conkle 1, Lot 8, Blk. 6	10-3	Vicksburg (?)	7138-68	80M	55
La Gloria (2)	Jim Wells	La Gloria's La Gloria 18, Lot 8, Blk. 11	10-6	Frio	6670-6700	167	39.5
Premont	Jim Wells	McCartney's Isham et al 1, sec. 78	7-6	Frio	3706-22	90	23
Reynolds	Jim Wells	Texas Gulf's Miller 8-A, Blk. 25	8-20	Frio	4770-82	13	31.3
Seeligson	Jim Wells	Magnolia's Seeligson 15, Ramirez gr	4-17	Frio	5885-5900	167	39.9
Seeligson	Jim Wells	Magnolia's Seeligson 16, Ramirez gr	7-1	Frio	6446-48	3.7M	55
Seeligson	Jim Wells	Magnolia's Seeligson 17, Ramirez gr	7-24	Frio	5555-57	168	38
Seeligson	Jim Wells	Sun's Canales 1, Canales sur. 182	7-13	Frio	5198-5210	173	39.9
Seeligson	Jim Wells	Transwestern's Dunlap 2, S. K. & K. sur. 179	7-9	Frio	6091-94	154	39.9
Sandia	Jim Wells	Killam's Wade Est. 13, Casa Blanca gr	1-21	Frio	5935-45	5M	51
Wade City	Jim Wells	Smith & Mosser's Mueller 1, Reynolds sur	11-17	Frio	3283-3302	20M	50
W. Alfred	Jim Wells	Wilcox's Adams 2, R. Adams sur	12-12	Frio	4304-13	1M	48.5
Washburn	La Salle	Quintana's Washburn 1, Earnest sur. 67	3-4	Wilcox	5415-30	65	40.5
Washburn (3)	La Salle	Quintana's Washburn 4, sec. 86	11-6	Wilcox	4822-41	20M	Gas
Washburn (3)	La Salle	Quintana's Washburn 4, sec. 86	11-6	Wilcox	5909-82	405	40.3
S. Campana	McMullen	Argo's Edrington 3-I, A. B. & M. sur. 61	12-3	Jackson	2554-68	8M	Gas
Agua Dulce-Stratton (4)	Nueces	10 new sands, more or less	...	...	...	...	...
Banquette	Nueces	Osborn & Midcontinent's Grove 1, Lot 68, Herrera gr	12-18	Frio	6978-83	50M	56
Bentonville-King	Neuces	Southern Minerals' Walker 12, sec. 33	8-3	Vicksburg	6230-35	13	56
Chapman	Nueces	Seaboard's Chapman et al 9, sec. 45	6-23	Catahoula	4269-79	163	27.9
Luby	Nueces	Seaboard's Luby 9, Palo Alto gr	2-7	Frio	7308-13	150	37.2
Minnie Bock	Nueces	Wellington's Howze 2, sec. 56	7-25	Frio	5510-18	....	54
Minnie Bock	Nueces	Windsor's Parr et al 1, sec. 37	5-14	Catahoula	3698-3712	41	24.5
N. Luby	Nueces	Buescher et al's Gillette 1, Tr. 6, C. D. C. sur	9-21	Frio	7308-15	180	40.6
N. Luby	Nueces	Buescher et al's Knight 1-A, Tr. 5, C. D. C. sur	10-28	Frio	6940-70	76	44
Riverside	Nueces	Stanolind's Thompson 2, Lot 24, Herrera gr	4-23	Vicksburg (?)	6970-75	50	55
Midway	San Patricio	Boykin's Scrivener 1, sec. J	6-23	Frio	6070-78	74	44
Midway	San Patricio	Pan American's Smith 1, sec. 72	9-15	Frio	6255-80	182	42.3
Odem	San Patricio	Seaboard's Lane et al 1, Blk. 11-A, C. & M. sur	8-25	Frio	5309-30	157	33.9
Odem	San Patricio	Seaboard's Lane et al 4, Trs. 11-A & 12-A	11-11	Catahoula	3538-48	2.5M	56
Odem	San Patricio	Wellington's Welder 1-C, Hart & Sons gr	6-27	Frio	5426-44	144	35.6
La Reforma	Starr	Porter & Pickens' Guerra 1, San Jose gr	10-25	Vicksburg	6140-68	168	42
N. Rincon	Starr	Sun's Hall 1, A. B. & M. sur. 99	7-11	Frio	4632-70	1M	52
N. Rincon	Starr	Sun's Saenz-State 4, Bozan sur. 80	7-28	Frio	4725-45	134	41.9
Sun	Starr	Circle's Olivares 2, C. C. S. D. & R. G. N. G. sur. 241	10-25	Frio	4500-65	13	47
Sun	Starr	Sun's Montalvo 1-C, Los Retachez gr	10-23	Vicksburg	5376-96	100	46.6
Coletto Creek	Victoria	American Liberty's Machales 5, Manchola 2-lge. gr	9-7	Frio	3573-89	2.2M	Gas
Coletto Creek	Victoria	Plummer's Terrell 4-A, Manchola 2-lge. gr	8-23	Frio	4495-4500	25M	Gas
Cologne	Victoria	Cox & Hamon's Balli 1, Gallardo gr	10-19	Frio	4632-42	77	....
N. McFaddin	Victoria	Barnsdall's Benitz 1, Blk. 36, Creanor sur	9-13	Frio	5767-71	85	38.9

(1) Dual sand wells—discovery sand only one shown. (2) Well taken over by Magnolia—reclassified as D. O. Maun No. 2. (3) Same well, dual sand. May be from same sand as field to north, but different position structurally. (4) Agua Dulce-Stratton is multiple sand region and no definite determinations can be made as to relation of sands over huge structure. At least 10 producers classify as new sand discoveries in 1941 at depths ranging from 5600-7250 feet. Majority likely are new lenses in already established sand zones.

West Texas
NEW FIELDS

Field	County	COMPANY, WELL AND LOCATION	Date	Producing Formation	Depth (Feet)	Initial Production	Gravity
W. Fuhrman	Andrews	Fuhrman Pet. Corp.'s Lockhart-Brown 1, 467 Ft. out NEc PSL sec. 24, Blk. A-42 (Pb. from 5600)	4-30	Permian	4248-4458	135	30
Wilson	Concho	Floyd Dodson et al's Wilson 1, 425 Ft. from N 1250 Ft. from W. lines sec. 1, Thos. Greene sur	12-30	Basal Penn	3753-68	5	45
	Crane	Continental Oil Co.'s Jones 1, C N¼ of N¼ H&TC sec. 12, Blk. 3, (Pb. from 6146)	11-8	Simpson	5700-63	83	42
W. Todd	Crockett	Amerada Pet. Corp. et al's Todd 1-C, C SW SW GC&SF sec. 15, Blk. 10	9-30	Crinoidal	6436-49	87	37.8
Clara Couch	Crockett	Inman & Harris (was R. H. Henderson's) Couch-Shell 1, 467 Ft. out NWc NE HE&WT sec. 37, Blk. GG	9-8	Permian	2160-81	356	24.5
Bean	Crockett	E. M. Wahlenmaier-Steve Currie's Bean 1-A, C SW NE GC&SF sec. 48, Blk. UV	2-19	Permian	1451-56	196	26
McCaulley	Fisher	F. A. Stevenson et al's Maberry 1, C SE SW HT&B sec. 56, Blk. 1	3-8	Swastika	3277-3313	2 S	41.6
Lubbock	Lubbock	L. C. Harrison et al's Nairn 1 C SE SE sec. 25, Blk. A, J. H. Gibson sur	10-16	Basal Clear Fork	4893-5002	124	28
	Pecos	H. L. Cain & Sam G. Dunn's Downs-Sun 1, 1787 Ft. from SW and 853 Ft. from SW lines H&GN sec. 105, Blk. 8	9-5	Permian	1412-1507	0.9M	Gas
Heiner	Pecos	Culbertson & Irwin, Inc.'s Heiner 1, C NE NE GC&SF sec. 589	2-22	Ellenberger	5382-5509	36	35.8
Wentz	Pecos	Gulf Oil Corp.-L. H. Wentz's Millar 2, C NW SE H&GN sec. 43, Blk. 11	12-27	Ellenberger	4307-83	261	33.7
Conry-Davis	Pecos	Stanolind Oil & Gas Co.'s Conry-Davis 1, C Lot 8, H&GN 31, Blk. 9	7-12	Permian (Tubb)	3710-3810	347	35.2
Barnhart	Reagan	Amerada Pet. Corp.'s University 1-R-A, C SE NE sec. 3, Blk. 48	9-1	Ellenberger	9017-66	1122	44
Spencer	Ward	Stanolind Oil & Gas Co.'s Spencer-Evans 1, 467 Ft. from NW and 2173 Ft. from SW lines H&TC sec. 53, Blk. 34	6-28	Permian	2920-90	226	25
		NEW PAY HORIZONS					
W. Andrews (Embar)	Ector	Phillips Pet.'s F. Cowden-Embar 1-A, C SE SE T&P sec. 6, Blk. 44, T-1-N (1st oil)	2-2	Permian	4210-4312	34	35
Wasson	Gaines	Amon G. Carter et al's Wasson 4-D, NWc SE PSL sec. 50, Blk. AX (Pb. from 11,108)	12-20	Lower Permian	7055-7375	520	34
Abell	Pecos	Magnolia Pet.'s Sharp-State 1, 467 Ft. out of SEc Lot 9, H&GN sec. 22, Blk. 9	3-27	Lower Simpson (Waddell)	5920-45	92	40
Abell	Pecos	Siemoneit Drilling's Walsh-Meyers 1, 330 Ft. out SWc Lot 11, H&GN sec. 25, Blk. 9 (Pb from 4989)	12-29	Permian	3350-70	264	36
Abell	Pecos	Stanolind Oil & Gas Co.'s L. Rathjen 1, C Lot 14, H&GN sec. 26, Blk. 9	11-7	Permian (Tubb)	3850-3950	759	36
Conry-Davis	Pecos	Magnolia & Geo. T. Abell's Myrick-State 1-B, 673 Ft. E. and 69 Ft. S. of SWc H&GN sec. 39, but on Myrick 21.95-ac. vacancy strip	12-7	Permian	2250-2300	66	36.6
Pecos Valley	Pecos	T. E. Jamison & Chas. Pollard (was Ward-Pecos Pet. Corp.'s) Pecos Valley 6-D-E, 150 Ft. from NE and 1049 Ft. from SE lines NE¼ of S¼ H&TC sec 36, Blk. 3	2-23	Permian	2037-41	193	24.4

West Central Texas
NEW FIELDS

	Brown	Guyle Greynolds et al's F. Crownover 1, 467 Ft. out of SEc sec. 26, Blk. 3, BBB&C—Sam H. Hall sur	6-9	Bend	2905-46	4M	Gas
Burks	Callahan	Ungren-Frazier et al's Ethel Burks 1, 220 Ft. out of SWc BBB&C sec. 116	3-16	Cisco	1089-94	31	40
Jim Ned	Coleman	Merry Bros. & Perini's C. M. Greer 1, 467 Ft. from W 1366 Ft. from S Lot 2, H. Kegans sur. No. 520	9-29	Strawn	3913-37	331	43.7
	Coleman	States Oil's Frank Hudson 1, 1980 Ft. from S 467 Ft. from W T&NO sec. 22, Blk. 2	5-1	Strawn	3482-85	10M	Gas
Featherstone	Coleman	States Oil's O. B. Featherstone 1, 467 Ft. out of NWc M. J. Goble sur. A-118	7-29	Strawn	3586-97	393	40
	Jones	W. W. Fondren et al's Hodges 1, 1401 Ft. from S, 467 Ft. from E of W-126½ of E-206½ of N½ T&P sec. 32, Blk. 18	5-19	Swastika	2948-57	26	40
South Noodle	Jones	Humble's J. C. Sears 2, 467 Ft. out of SWc T&P sec. 37, Blk. 18	1-13	Swastika	3012-22	1182	44
Wimberly	Jones	Harry Hines et al's Wimberly 1, 330 Ft. out SWc Blk. 87, De Witt CSL sur. No 126	4-17	Gunsight	2538-52	216	41
	Jones	Hendrickson & Milner's (was T. J. Coyne's) Clyburn 1, 1350 Ft. from W and 852 Ft. from N lines Blk. 24, Henry Millard sur. A-243	12-31	Cisco	2362-72	18	38
Roark	Shackelford	R. H. Roark et al's Elliott 1-A, C SW SE sec. 9, Lunatic Asylum Lands	7-22	Strawn	2879-89	6.6M	Gas
	Stephens	O. A. Daniels et al's Max Blach 1, 467 Ft. out SWc TE&L sec. 1283	9-1	Bend	3292-3301	4M	Gas
	Stephens	Tom G Shaw, Tr.'s E. Whalen 1, 467 Ft. out NWc TE&L sec. 1088	12-2	Marble Falls	4077-95	10.4M	Gas
Merkel	Taylor	Fain-McGaha Oil's (was W. H. Peckham et al's) R. Perry 1, 330 Ft. out NWc Blk. 5, Grimes CSL sur. League 124	6-23	Dothan	2013-19	71	38
		NEW PAY HORIZONS					
West Brownwood	Brown	Hightower Oil & Refg. Co.'s Buckner's Orphanage 1-B, 1675 Ft. from SE 4400 Ft. from SW lines Wm. Iron sur. No. 52	4-3	Marble Falls	1419-1533	304	40
Overall	Coleman	Anzac Oil's Sealy-Smith 1, 254 Ft. W 3300 Ft. S of NEc GH&H sec. 13, Blk. 1 (DD from 1637 Ft.)	5-7	Canyon	2222-28	119	40
North Avoca	Jones	King Oil's Olson 2, 380 Ft. from N 1359 Ft. from W of NE¼ BBB&C sec. 189	4-24	Gunsight	1963-74	45	40
Lewis-Steffins	Jones	Sandy Ridge Oil's Alton-Magnolia 5, 220 Ft. out NEc SW 40-ac. T&P sec. 33, Blk. 15	2-12	Upper Hope	2014-25	210	40
Stith	Jones	Danciger Oil & Refineries, Inc.'s Kelso 2, 1129 Ft. from S 330 Ft. from W Blk. 82, De Witt CSL, League 126	3-27	Gunsight	2670-76	102	40
Wimberly	Jones	W. D. Brookover-H. W. Lee's Church 1, 330 Ft. from E 460 Ft. from S lines Blk. 88, De Witt CSL, League 126	6-18	Cisco (King)	2438-46	245	42
Wimberly	Jones	J. L. Collins & Co.'s Fikes 1, 330 Ft. from E 200 Ft. from N lines Blk. 105, De Witt CSL, League 126 (later DD lower pay)	8-8	Lower Hope	2231-46	552	41
Eliasville	Stephens	Christie Bros. et al's Donnell 1, 2900 Ft. from N 440 Ft. from E lines TE&L sec. 1208	11-18	Marble Falls	4210-15	25	....
Loving	Stephens	Lone Star Gas Co.'s (was Dick Andrade, III, et al's) Walls Pasture Co. 1, NE NE sec. 13, Orphan Asylum Lands	8-20	Ranger	4068-75	1.1M	Gas
Stroud	Stephens	Tom G. Shaw, Tr.'s S. B. Stroud 1-B, 467 Ft. out NEc E½ SW¼ of Green Newton sur. A-128	9-18	Basal Strawn	3035-65	129	41
Merkel	Taylor	Lewis Production's Huddleston 1, 330 Ft. out NWc Blk. 6, Grimes CSL sur. League No. 124	8-20	Lower Hope	2619-26	190	38

Wyoming
NEW FIELDS

Middle Frannie	Park	Stanolind Oil & Gas' Rosenburg 21-X, C NE SW NW 25-58n-98w	7-17	Tensleep	2634-46	200	27.9
Canyon Creek	Sweetwater	West States Oil's Unit 1, NW SE SE 10-12n-101w	8-27	Wasatch	2688-2710	1.5M	Gas

Production by Fields

Cumulative recovery of three additional United States fields reaches 100 million barrels, making 42 in all

DURING 1942, three more American oil fields are due to qualify for the rank of "100-Million-Barrel" fields, which so far is limited to 42 pools located in Texas, California, Oklahoma, Arkansas, Wyoming, and Illinois. At the end of the year, New Mexico also will be among the states with million-barrel fields.

The three fields that will attain the rare distinction include Chalk in Howard and Glasscock Counties, West Texas; Big Lake in Reagan County of West Texas; and Hobbs in Lea County, New Mexico.

In a class by itself, with almost 1¾ billions of barrels to its credit and still going strong, is the East Texas field, which may never give up its position as the No. 1 field of the United States in cumulated production, inasmuch as its ultimate recovery is calculated as high as 5 billion barrels.

Production of all important U. S. fields appears on pages 76 to 98

East Texas produced 132,517,790 barrels of oil in 1941. That output brought cumulated production up to 1,702,847,010 barrels for the 12 years since discovery in late 1930, an average of 142,000,000 barrels per year.

Although East Texas remains the country's only unqualified billion-barrel oil field, grouping of the closely related pools of the 15-year-old Seminole area of Oklahoma provides another "field" of more than a billion barrels of cumulated production. Those pools are principally in Seminole and Pottawatomie Counties but also include some in Hughes and Okfuskee Counties. All those pools of the "Seminole Area" together had produced 1,154,470,342 barrels at the end of 1941, including 39,732,074 in 1940 and 39,841,200 in 1941.

Five of these pools rate individually as 100-million-barrel fields. Most prolific of them has been St. Louis, with cumulated output of 154 million barrels at the end of 1941, while Seminole City had to its credit 129 million, Earlsboro 125 million, Bowlegs 119 million, and Little River 112 million.

Not far short of a billion barrels in recorded production is the Midway-Sunset field of the San Joaquin Valley in California, which, although 40 years old, still is producing over 17,000,000 barrels annually (nearly 50,000 daily), and cumulated production had reached 910,470,143 barrels at the end of 1941.

Over 40 Oil Fields of United States Have Produced More Than 100 Millions of Barrels Each

FIELD	State	*District	County	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Over or Near Billion Barrels:							
East Texas	Texas	Eastern	5 Counties†	1930	141,023,000	132,517,790	1,702,847,010
Seminole Area‡	Oklahoma	‡	‡	1926	39,732,074	39,841,200	1,154,470,342
Midway-Sunset	California	San Joaquin	Kern	1900	18,397,393	17,459,047	910,470,143
Around Half Billion Barrels:							
Long Beach	California	Los Angeles	Los Angeles	1921	16,009,359	14,705,806	666,990,921
Oklahoma City	Oklahoma	Okla. City	Oklahoma	1928	35,806,489	32,183,700	546,750,182
Santa Fe Springs	California	Los Angeles	Los Angeles	1921	9,437,770	8,554,134	474,657,429
300-400 Million Barrels:							
Smackover	Arkansas	Southern	Ouachita-Union	1922	5,539,737	5,281,767	388,951,588
Coalinga	California	San Joaquin	Kern	1896	9,915,792	14,227,737	386,143,223
Cushing	Oklahoma	East Central	Creek	1912	3,350,713	3,322,500	359,447,310
Kern River	California	San Joaquin	Kern	1900	4,081,861	4,312,217	328,673,943
Huntington Beach	California	Los Angeles	Orange	1920	9,592,134	10,729,194	301,519,185
200-300 Million Barrels:							
Salt Creek	Wyoming	Central	Natrona	1908	5,206,284	5,149,943	298,713,658
Yates	Texas	West Texas	Pecos	1926	6,866,043	5,643,946	259,836,608
Kettleman N. Dome	California	San Joaquin	Kings	1932	16,729,502	13,995,190	252,267,184
Ventura Avenue	California	Coastal	Ventura	1926	12,569,511	12,896,300	227,600,495
Glenn Pool	Oklahoma	East Central	Creek	1905	1,241,142	1,308,600	220,579,477
Burbank	Oklahoma	Osage	Osage & Key.	1920	2,850,210	3,281,500	205,158,428
Hendricks	Texas	West Texas	Winkler	1926	2,950,753	2,847,319	201,781,917
150-200 Million Barrels:							
Healdton	Oklahoma	Southwestern	Carter	1913	3,177,702	3,085,709	190,552,287
Brea-Olinda	California	Los Angeles	Fullerton	1897	2,070,210	2,073,327	169,044,781
Elk Hills	California	San Joaquin	Kern	1919	4,427,223	3,491,639	157,797,035
Santa Maria	California	Coastal	Santa Barbara	1902	2,215,975	3,213,756	156,535,942
Burkburnett	Texas	North	Wichita	1912	1,835,692	1,806,000	155,957,652
St. Louis	Oklahoma	Seminole	Pottawatomie	1927	9,947,446	6,529,500	154,550,161
Salem	Illinois		Marion	1938	70,500,500	29,812,400	153,397,400
100-150 Million Barrels:							
Electra	Texas	North	Wichita	1911	2,897,564	2,800,800	142,367,773
Wilmington	California	Los Angeles	Los Angeles	1937	30,195,607	30,706,305	140,355,894
Coyote	California	Los Angeles	Los Angeles	1912			135,283,461
Dominguez	California	Los Angeles	Los Angeles	1923	7,665,156	8,515,360	130,377,957
Conroe	Texas	Gulf Coast	Montgomery	1931	9,303,000	11,617,700	129,149,700
Van	Texas	Eastern Texas	Van Zandt	1929	4,128,857	3,695,282	128,991,460
Seminole City	Oklahoma	Seminole	Seminole	1926	2,502,947	2,242,900	128,848,091
Rodessa: Total	3 States				14,227,362	10,996,851	128,271,877
Rodessa	Louisiana	North	Caddo	1930	6,904,220	5,746,000	73,709,140
Rodessa	Texas	East	Cass	1935	6,606,149	4,747,571	48,318,547
Rodessa	Arkansas	South	Miller	1937	716,993	503,280	6,244,190
Montebello	California	Los Angeles	Los Angeles	1917	7,239,982	4,896,931	127,435,306
Humble	Texas	Gulf Coast	Harris	1904	955,000	919,967	126,763,645
Spindletop	Texas	Gulf Coast	Jefferson	1901	609,000	487,316	125,891,784
Inglewood	California	Los Angeles	Los Angeles	1924	4,364,975	4,914,447	125,832,447
Earlsboro	Oklahoma	Seminole	Seminole	1926	1,500,576	1,344,300	125,465,285
Tonkawa	Oklahoma	Northern	Kay	1921	623,715	632,100	121,365,242
Bowlegs	Oklahoma	Seminole	Seminole	1926	2,468,591	2,134,200	118,920,240
Powell	Texas	Eastern Texas	Navarro	1900	633,038	587,842	115,298,006
Little River	Oklahoma	Seminole	Seminole	1927	2,414,979	2,269,570	111,745,451
Torrance	California	Los Angeles	Los Angeles	1922	4,007,224	3,199,765	104,733,655

* For California fields, San Joaquin indicates San Joaquin Valley and Los Angeles indicates Los Angeles Basin.
† Cherokee, Gregg, Rusk, Smith, Upshur.
‡ Seminole Area as shown in this table includes numerous pools of Hughes, Okfuskee, Pottawatomie, and Seminole counties.

Arkansas

(Data for 1940 and 1941 from Arkansas Oil and Gas Commission. For 1941, December is estimated and November figures are subject to slight revision.)

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Atlanta	Columbia	1938	721,735	1,018,284	1,828,841
Big Creek	Columbia	1940	25,100	42,379	68,824
Bradley	Lafayette	1925	.....	.....	186,705
Bragg*	Ouachita	1934	.....	.....	.....
Buckner	Columbia-Lafayette	1937	803,366	814,361	2,630,314
Camden	Ouachita	1934	241	.....	37,840
Champagnolle	Union	1927	411,540	329,954	14,906,339
Dorcheat	Columbia	1939	417,369	668,985	1,123,021
East El Dorado	Union	1921	132,036	104,778	9,483,694
El Dorado South	Union	1920	462,449	417,992	48,354,414
Falcon	Nevada	1938	.....	.....	.....
Fouke	Miller	1940	45,566	154,438	200,004
Garland City	Miller	1932	86,209	80,407	1,983,384
Irma†	Nevada	1921	620,436	557,297	8,971,956
Lewisville	Lafayette	1939	226,712	100,010	474,975
Lisbon	Union	1925	75,053	68,106	6,763,033
Macedonia	Columbia	1941	.....	111,821	111,821
McKamie	Lafayette	1940	76,127	904,588	980,715
Magnolia	Columbia	1938	7,377,205	7,131,311	18,357,117
Mt. Holly	Ouachita	1929	.....	.....	117,085
Mount Holly	Union	1929	.....	10,995	10,995
Nick Springs	Union	1940	181,132	307,345	488,477
Patton	La Fayette	1941	.....	17,478	17,478
Rodessa Extension	Miller	1937	716,993	503,280	6,244,190
East Schuler	Union	1941	.....	43,461	43,461
Schuler-Jones	Union	1937	5,342,341	4,928,381	21,060,067
Schuler-Lime	Union	1937	994,358	877,493	3,223,466
Schuler-Morgan	Union	1937	241,922	215,735	2,271,590
Smackover	Ouachita-Union	1922	5,539,737	5,281,767	388,951,588
Snow Hill‡	.....	.....	.....	.....	.....
Stephens	Columbia-Ouachita	1922	190,421	242,981	6,787,230
Troy–	Nevada	1936	.....	.....	.....
Urbana	Union	1929	466,461	829,722	6,209,717
Village	Columbia	1938	417,281	358,541	1,143,259
Woodley*	Union	1922	.....	.....	.....
Total Arkansas	.....	1920	25,571,790	26,121,890	553,031,600

* No record. † Includes Troy. ‡ Included in Smackover. – See Irma.

California Summary

San Joaquin Valley	.....	1896	87,281,943	93,746,208	2,465,362,561
Coastal District	.....	1859	29,558,877	32,376,765	580,576,626
Los Angeles Basin	.....	1894	108,039,892	104,278,732	2,792,247,129
Unclassified	.....	.....	.....	.....	.....
Total California	.....	1859	224,880,712	230,401,705	5,838,186,316

California—San Joaquin Valley

Arvin	Kern	1939	646,548	262,545	1,354,769
Belridge, North	Kern	1934	3,860,926	3,426,901	31,035,678
Belridge, South	Kern	1934	752,732	758,145	5,393,475
Canal	Kern	1937	2,033,770	1,834,543	6,603,700
Canfield Ranch	Kern	1938	15,764	15,661	88,169
Coalinga	Kern	1896	9,915,792	14,227,737	386,143,223
Colen Levee	Kern	1938	1,329,813	3,884,432	5,560,608
Dyer Creek	Kern	1941	.....	2,535	2,535
Edison	Kern	1934	868,300	1,010,622	8,534,314
Elk Hills	Kern	1919	4,427,223	3,491,639	157,797,035
Fruitvale	Kern	1928	2,071,914	2,089,514	24,728,136
Greeley	Kern	1936	1,475,378	2,467,516	6,449,577
Heim	Kern	1941	.....	705	705
Jacalitos	Kern	1941	.....	4,495	4,495
Kern River	Kern	1900	4,081,861	4,312,217	328,673,943
Kettleman Middle Dome	Kings	1932	.....	.....	544,491
Kettleman North Dome	Kings	1932	16,729,502	13,995,190	252,267,184
Lost Hills, Belridge	Kern	1910	.....	.....	70,887,784
Lost Hills	Kern	1934	1,405,339	1,258,279	11,169,792
McKittrick	Kern	1898	1,316,775	1,412,087	92,390,830
Midway-Sunset	Kern	1900	18,397,393	17,459,047	910,470,143
Mountain View	Kern	1933	2,414,878	1,901,431	39,959,082
Mount Poso	Kern	1927	3,424,980	4,103,904	55,300,582
Paloma	Kern	1939	129,878	37,125	190,210
Raisin City	Kern	1941	.....	56,615	56,615
Rio Bravo	Kern	1937	3,303,835	4,521,548	12,773,200
Round Mountain	Kern	1927	2,691,430	2,814,399	31,197,948
Shafter	Kern	1941	.....	19,704	19,704
Strand	Kern	1939	527,621	550,193	1,212,322
Ten Section	Kern	1936	3,518,036	5,223,959	15,582,481
Tupman	Kern	1938	1,259,156	1,816,077	3,267,302
Union Avenue	Kern	1941	.....	49,102	49,102
Wasco	Kern	1938	570,216	634,974	1,732,491
Wheeler Ridge	Kern	1923	112,883	103,367	3,920,936
Total San Joaquin Valley	.....	1896	87,281,943	93,746,208	2,465,362,561

California—Coastal District

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Capitan	Santa Barbara	1929	650,858	757,775	5,665,316
Elwood, Goleta	Santa Barbara	1927	1,286,146	1,161,595	68,449,772
Rincon	Ventura	1927	1,609,319	1,568,511	14,135,885
San Miguelito	Ventura	1931	1,163,071	1,448,786	7,566,628
Santa Barbara	Santa Barbara	1929	84,112	73,842	3,463,492
Santa Maria Valley	Santa Barbara	1940	6,096,086	6,961,550	13,057,636
Santa Maria	Santa Barbara	1902	2,215,975	3,213,756	156,535,942
Summerland	Santa Barbara	1894	8,434	4,543	3,171,003
Ventura Avenue	Ventura	1926	12,569,511	12,896,300	227,600,495
Ventura County and Newhall	Ventura	Prior to 1876	2,866,215	4,281,000	80,559,502
Watsonville	Ventura	1923	9,150	9,107	370,955
Total Coastal District	.....	1859	29,558,877	32,376,765	580,576,626

California—Los Angeles Basin

Brea-Olinda	Fullerton	1897	2,070,210	2,073,327	169,044,781
Coyote	Los Angeles	1912	.....	.....	135,283,461
Coyote, East	Los Angeles	1934	1,385,650	1,385,121	9,162,664
Coyote, West	Los Angeles	1934	2,667,014	3,070,543	24,609,124
Dominguez	Los Angeles	1923	7,665,156	8,515,360	130,377,957
El Segundo	Los Angeles	1936	784,946	528,333	10,134,832
Huntington Beach	Orange	1920	9,592,134	10,729,194	301,519,185
Inglewood	Los Angeles	1924	4,364,975	4,914,447	125,832,447
Lawndale	Los Angeles	1928	14,738	10,761	1,122,440
Long Beach	Los Angeles	1921	16,009,359	14,705,806	666,990,921
Los Angeles and Salt Lake	Los Angeles	1894	194,684	197,584	66,328,327
Montebello	Los Angeles	1917	7,239,982	4,896,931	127,435,306
Newport	Orange	1925	.....	.....	129,120
Playa del Rey	Los Angeles	1929	1,498,274	1,316,516	48,103,362
Potrero	Los Angeles	1927	687,408	711,512	4,306,879
Richfield	Los Angeles	1919	3,228,127	2,723,191	95,540,321
Rosecrans	Los Angeles	1924	4,258,632	3,429,628	48,310,390
Santa Fe Springs	Los Angeles	1921	9,437,770	8,554,134	474,657,429
Seal Beach	Los Angeles	1926	2,557,204	2,428,015	89,889,203
Torrance	Los Angeles	1922	4,007,224	3,199,765	104,733,655
Turnbull Canyon	Los Angeles	1941	.....	13,828	13,828
Whittier	Los Angeles	1912	180,798	168,431	18,365,603
Wilmington	Los Angeles	1937	30,195,607	30,706,305	140,355,894
Total Los Angeles Basin	.....	1894	108,039,892	104,278,732	2,792,247,129

Colorado

Berthoud	Larimer	1929	3,060	2,890	60,132
Boulder	Boulder	1902	4,405	3,910	653,694
Florence	Fremont	1861	55,458	53,844	13,733,170
Ft. Collins	Larimer	1923	56,395	42,019	2,228,901
Greasewood	Weld	1930	8,857	6,021	469,711
Hamilton (Moffat)	Moffat	1923	111,217	111,335	5,792,862
Hiawatha	Moffat	1927	96,674	188,349	335,581
Iles	Moffat	1924	580,262	545,704	9,063,607
Powder Wash	Moffat	1936	.....	25,297	25,297
Price	Archuleta	1934	304,877	96,348	955,762
Rangely	Rio Blanco	1919	118,258	57,291	806,245
Tow Creek	Routt	1924	50,752	49,180	1,737,537
Walden	Jackson	1927	.....	.....	85,366
Wellington	Larimer	1924	71,533	70,337	4,919,951
Wilson Creek	Moffat	1937	239,796	457,372	876,823
Total Colorado	.....	1861	1,701,544	1,709,897	41,744,639

Illinois Summary

Illinois Basin: New Pools Found Before 1941	.....	1937	142,571,698	111,155,940	364,224,240
Illinois Basin: New Pools Found in 1941	.....	1941	.....	13,939,760	13,939,760
Illinois Basin: Old Pools	.....	1909	537,000	405,600	8,839,970
Total Illinois Basin	.....	....	143,108,698	125,501,300	387,003,970
Other Illinois Pools	.....	....	4,430,000	3,894,500	440,501,830
Total Illinois	.....	....	147,538,698	129,395 800	827,505,800

Illinois—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
ILLINOIS BASIN: New Pools Found Before 1941					
Albion	Edwards	1940	1,251,000	897,200	2,148,200
Aden, North	Wayne	1938	897,957	549,400	2,470,400
Barnhill	Wayne	1939	660,547	232,700	1,486,700
Boos	Jasper	1940	40,000	811,600	851,600
Boos, North	Jasper	1940	187,000	723,400	910,400
Boyleston	Wayne	1938	1,372,488	822,900	2,411,900
Burnt Prairie	White	1940	150,000	112,500	262,500
Centerville	White	1940	55,000	67,800	122,800
Centralia	Clinton-Marion	1938	11,860,609	3,622,900	21,400,900
Cisne	Wayne	1937	479,717	225,700	2,467,700
*Clay City	Clay-Wayne	1937	4,133,309	2,324,300	18,115,300
Cordes	Washington	1939	728,565	528,500	1,722,500
Dale	Hamilton	1940	322,000	2,751,400	3,073,400
Dix	Jefferson	1938	1,072,519	758,700	2,703,700
Dundas	Richland	1939	2,072,079	1,375,500	3,666,500
Enterprise	Wayne	1939	1,767,494	1,704,300	4,740,300
Enterprise, West	Wayne	1940	90,000	760,700	850,700
Grayville	Edwards and White	1939	70,609	26,700	131,700
†Griffin	Wabash	1939	3,214,750	2,319,600	6,512,600
Herald	White	1940	4,000	18,700	22,700
Hidalgo	Jasper	1940	13,000	2,800	15,800
Hoffman	Clinton	1939	121,874	147,600	269,600
Hoodville	Hamilton	1940	216,000	3,737,100	3,953,100
Inman	Gallatin	1940	4,000	9,700	13,700
Iron	White	1940	1,157,000	512,200	1,669,200
Irvington	Washington	1940	481,000	1,055,500	1,536,500
Junction	Gallatin	1939	103,345	43,200	170,200
Lancaster	Wabash	1940	370,000	95,300	465,300
Linn	Wabash	1940	11,000	91,800	102,800
Louden	Fayette	1938	26,173,030	22,778,600	68,904,600
Maud	Wabash	1940	32,000	173,100	205,100
Mill Shoals	White	1939	557,406	779,500	1,468,500
New Harmony	White	1939	549,133	3,217,600	3,772,600
New Harmony, N.	White	1940	156,000	2,456,400	2,612,400
Noble	Richland	1937	1,959,697	1,945,400	9,743,400
Noble, North	Richland	1937	701,787	533,200	1,975,200
Noble, South	Richland	1937	62,783	55,600	396,600
Olney	Richland	1938	209,930	145,400	1,090,400
Patoka	Marion	1937	419,468	413,200	2,507,200
Roaches	Jefferson	1938	177,411	92,300	352,300
Roland	White	1940	3,000	1,034,600	1,037,600
Salem	Marion	1938	70,500,500	29,812,400	153,397,400
Sandoval (Devonian)	Marion	1938	719,000	451,700	1,970,700
St. James	Fayette	1938	1,668,600	1,958,100	4,116,100
Stokes	White	1939	114,000	52,200	226,200
Storms	White	1939	1,219,000	1,432,500	2,682,500
Thompsonville	Franklin	1940	68,000	122,700	190,700
Tonti	Marion	1939	2,631,200	43,300	3,528,300
West Liberty	Jasper	1940	216,300	2,058,400	2,274,700
Woburn	Bond	1940	101,000	166,600	267,600
Other Pools			1,425,591	15,103,440	17,235,440
Total Basin New Pools Found Before 1941		1937	142,571,698	111,155,940	364,224,240
ILLINOIS BASIN: New Pools Found in 1941					
Iola	Clay	1941		2,000	2,000
Sailor Springs	Clay	1941		164,100	164,100
Posey	Clinton	1941		2,200	2,200
Ellery	Edwards, Wayne	1941		12,600	12,600
St. Paul	Fayette	1941		500	500
Benton	Franklin	1941		6,127,500	6,127,500
Inman, East	Gallatin	1941		451,500	451,500
Inman, North	Gallatin	1941		5,700	5,700
Bungay	Hamilton	1941		3,200	3,200
Dahlgren	Hamilton	1941		684,600	684,600
Rural Hill	Hamilton	1941		1,458,700	1,458,700
Walpole	Hamilton	1941		230,200	230,200
Elkville	Jackson	1941		360	360
Woodlawn	Jefferson	1941		2,618,700	2,618,700
Alma	Marion	1941		4,300	4,300
Patoka, East	Marion	1941		670,700	670,700
Bonpas	Richland	1941		16,200	16,200
Bonpas, West	Richland	1941		52,400	52,400
Parkersburg	Richland	1941		768,600	768,600
Lakewood	Shelby	1941		7,300	7,300
Allendale	Wabash	1941		116,200	116,200
Barnhill, East	Wayne	1941		6,600	6,600
Jeff	Wayne	1941		2,600	2,600
Mayberry	Wayne	1941		4,900	4,900
Epworth	White	1941		13,300	13,300
Grayville	White	1941		6,300	6,300
Maunie	White	1941		2,900	2,900
Maunie	White	1941		6,500	6,500
Maunie	White	1941		331,800	331,800
New Haven	White	1941		167,300	167,300
Total Basin New Pools Found in 1941		1941		13,939,760	13,939,760

* Includes Clay City, West.
† Includes Keensburg and Cowling.

Illinois—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
ILLINOIS BASIN: Old Pools					
Bartelso	Clinton	1936	226,000	99,500	686,070
Carlyle	Clinton	1911	33,000	26,700	3,433,100
Dupo	St. Clair	1928	237,000	249,700	1,580,100
Sandoval	Marion	1909	26,000	16,600	2,708,400
Wamac	Marion-Clinton Washitgton	1922	15,000	13,100	432,300
Total Basin Old Pools		1909	537,000	405,600	8,839,970
OTHER ILLINOIS POOLS					
Eastern Illinois (Stripper)			3,204,000	3,780,500	440,501,830
Northwestern Illinois (Stripper)			1,226,000	114,000	
Total Other Illinois Pools			4,430,000	3,894,500	440,501,830

Kansas

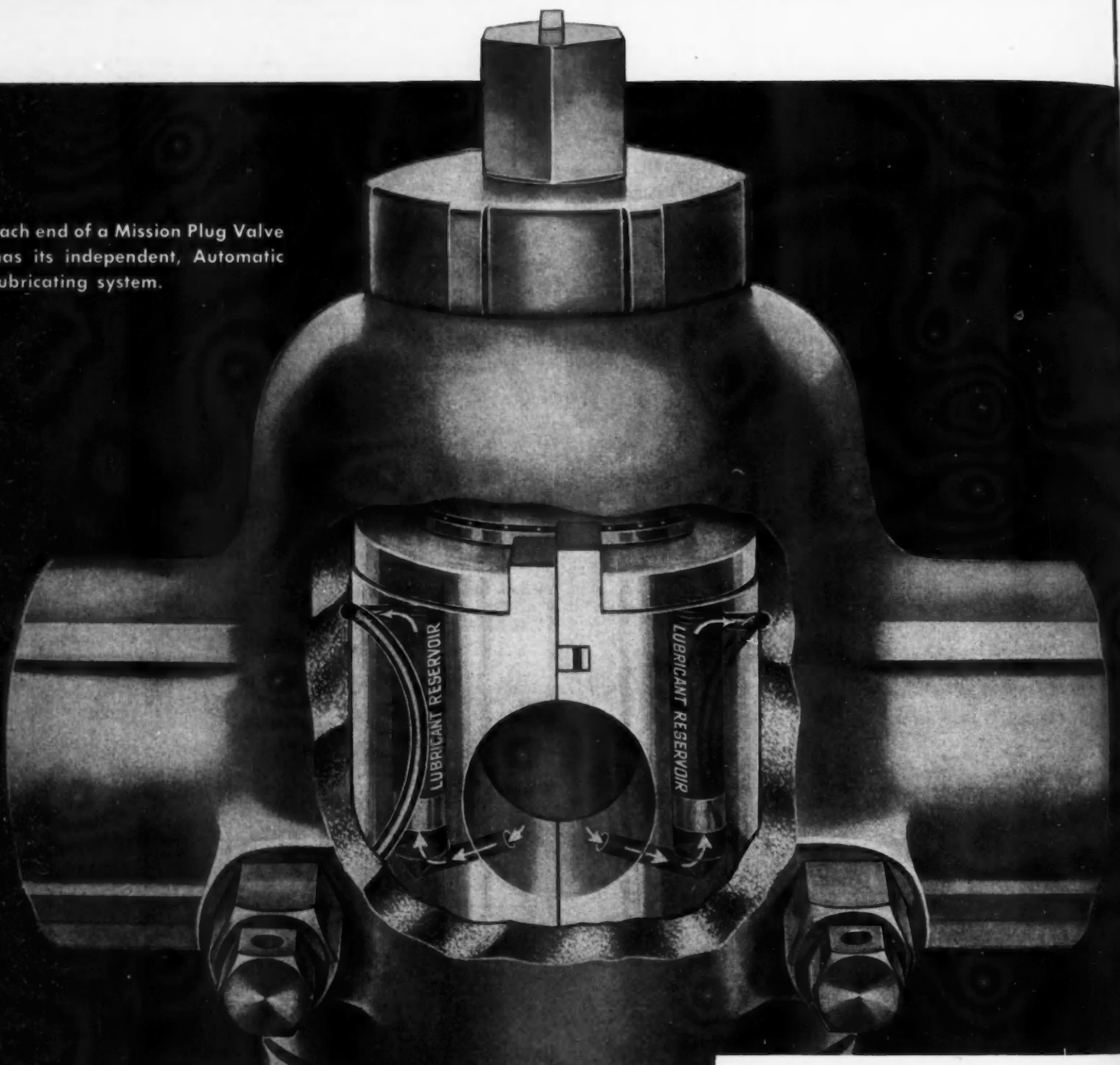
OLDER FIELDS

Bemis-Schutts	Ellis	1935	8,451,052	4,187,000	12,638,052
Bloomer	Barton-Ellsworth	1936	3,441,098	2,101,300	5,542,398
Bornholt*	McPherson-Rice	1937	74,930	1,680,800	1,755,730
Burrton-Haury	Reno	1931	27,880,619	2,539,300	30,419,919
Chase	Rice	1931	18,689,983	2,009,400	20,699 383
El Dorado	Butler	1917	174,618,269	2,597,000	177,215,269
Geneseo	Rice	1934	3,765,597	1,866,200	5,631,797
Gorham	Russell	1926	10,945,619	2,426,400	13,372,019
Graber	McPherson	1934	4,089,935	951,100	5,041,035
Unclassified	Greenwood		110,308,570	3,251,200	113,559,770
Hall-Gurney	Russell	1931	3,775,772	3,520,200	7,295,972
Hittle	Cowley	1926	†	834,800	†
Hollow-Nikkel	Harvey	1931	17,755,208	513,100	18,268,308
Keesling	Rice	1935	2,339,871	411,700	2,751,571
Lerado	Reno	1935	1,823,764	259,900	2,083,664
Lorraine	Ellsworth	1934	7,295,638	461,400	7,757,038
Oxford	Sumner	1937	14,033,178	191,800	14,224,978
Prusa	Barton	1939	122,500	493,800	616,300
Rainbow Bend	Cowley	1923	12,653,043	329,300	12,982,343
Raymond	Rice	1929	5,522,355	450,900	5,973,255
Ritz-Canton	McPherson	1929	32,279,273	1,365,900	33,645,173
Trapp	Barton-Russell	1939	12,243,947	7,195,300	19,439,247
Silica	Rice	1931	24,031,672	7,064,400	31,096,072
Voshell	McPherson	1929	22,385,070	585,500	22,970,570
Wellington	Sumner	1929	3,989,204	334,900	4,324,104
Wherry	Rice	1933	5,367,560	1,067,600	6,435,160
Zenith	Stafford	1937	1,671,536	3,176,300	4,847,836
Unclassified			449,834,087	30,295,232	480,964,119
1941 DISCOVERIES					
Bruce	Cowley (abd.)			3,468	3,468
Frog Hollow, East	Cowley			5,100	5,100
Gibson	Cowley			16,300	16,300
Youngmeyer	Elk			3,700	3,700
Keller	Greenwood			11,700	11,700
Ainsworth, N.W.	Barton			11,400	11,400
Ainsworth, West	Barton			1,700	1,700
Kraft, West	Barton			8,000	8,000
Steckney, "A"	Barton			2,100	2,100
Straub	Barton			4,100	4,100
Highspot	Ellis			3,100	3,100
Sugarloaf	Ellis			10,800	10,800
Sugarloaf, S.E.	Ellis			3,000	3,000
Kearney-Patterson	Hearney			6,000	6,000
Hewitt	Norton			5,400	5,400
Dayton	Phillips			4,500	4,500
Peace Creek	Reno			36,100	36,100
Erway	Rooks			1,700	1,700
Forrest Hill	Russell			8,200	8,200
Gustason	Russell			1,800	1,800
Rusch	Russell			34,600	34,600
Nachsville	Stafford			24,400	24,400
Shaeffer	Stafford			49,200	49,200
Total, 1941 Discoveries				256,368	256,368
Total Kansas			979,389,350	82,418,100	1,061,807,450

* Includes North Barnholdt. † Included in "Unclassified."

MISSION'S LUBRICATING S

Each end of a Mission Plug Valve has its independent, Automatic lubricating system.



Line pressure bears against the underside of the pistons in the reservoirs (as shown by the arrows) and automatically forces lubricant from the reservoir into the downstream full-port sealing groove. The greater the line pressure the tighter the Mission lubricating system packs lubricant into the vital sealing area.

Pat. Reissue No. 20,093
Patent No. 2,269,886
Patent No. 2,269,887

SYSTEM IS AUTOMATIC

LINE PRESSURE IS 'PUT-TO-WORK'

. . . to keep sealing grooves constantly pressure-packed with lubricant . . . by automatically forcing lubricant from reservoirs to sealing grooves which completely surround each port.

The Mission Automatic Lubrication System responds instantly to high or low pressures—gas, liquid, or mud—and does so regardless of which end of the valve may be downstream. So long as lubricant remains in the reservoirs, a perfect seal is assured.

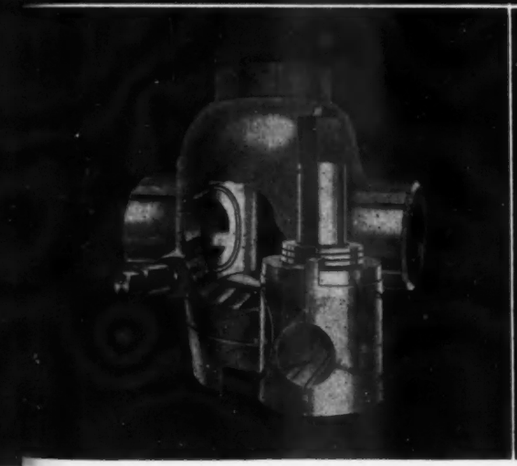
AND MAKES OPENING EASIER—Mission Automatic Lubrication retards corrosion and helps keep foreign matter from between sealing surfaces. Result—these surfaces are kept smooth and well lubricated, assuring easy turning at all times.

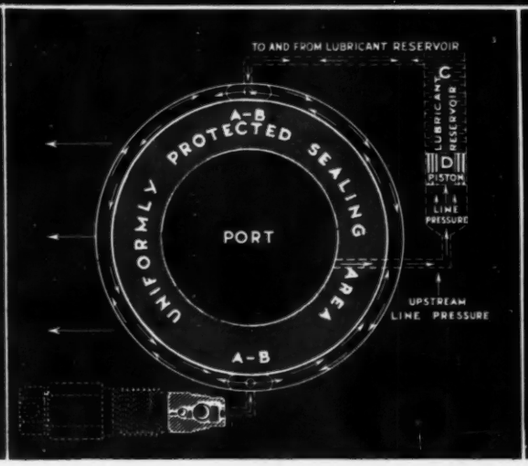
AND KEEPS DOWN WEAR—Mission Valves last longer because continuous automatic lubrication keeps down corrosive and abrasive wear. You get longer, trouble-free service from every Mission Valve.

But that's not all. A wedge-proof, cylindrical, super-surfaced core also adds to the performance of these valves.

• Find out, as many others have done, why Mission's Automatic Lubrication System seals better, and makes valves turn easier and last longer.

MISSION PLUG VALVES





ONLY MISSION Plug Valves Give You All 4

1. Automatic Lubrication.
2. Full-Port Lubricant Sealing Grooves.
3. Wedge-Proof Cylindrical Super-Surfaced Core.
4. Sealing Grooves on Plug Never Pass Ports.

Semi-circular grooves in the body surrounding one-half of each port are joined (when the valve is closed) by semi-circular grooves in the core—forming full circular grooves to completely protect each port. Moreover, no lubricant groove ever passes a body port. This protects lubricant in the core grooves from the washing action of the fluid.

When lubricating a Mission Plug Valve, a portion of the lubricant is forced into reservoirs. Thereafter, line pressure AUTOMATICALLY feeds this stored lubricant into the downstream seal grooves. So long as lubricant remains in the reservoir, a perfect seal is assured.

SEE YOUR COMPOSITE CATALOG
Pages 1686 to 1698 of the 1942 Composite Catalog carry full details including prices on Mission Plug Valves.

MISSION MANUFACTURING CO.

HUMBLE ROAD, HOUSTON, TEXAS
EXPORT OFFICE: 30 ROCKEFELLER PLAZA, NEW YORK

Louisiana Summary

FIELD	PARISH	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
North Louisiana		1904	24,381,760	25,386,995	559,650,755
South Louisiana		1901	78,806,554	91,455,283	630,587,537
Total Louisiana		1901	103,188,314	116,842,278	1,190,238,292

(Data for 1941 based on allowable production under State proration orders.)

North Louisiana

Bellevue	Bossier	1921	182,550	179,950	10,672,385
Caddo	Caddo	1904	2,809,945	2,312,900	161,643,265
Carterville	Bossier	1927	27,937	90,585	1,693,032
Converse	Sabine	1932	192,505	158,270	2,465,285
Cotton Valley	Webster				
Shallow, gas and heavy oil		1922	1,060	†	†14,942,500
Holloway, light oil		1936	1,031,795	770,971	5,143,037
Bodcaw, gas-distillate		1937	2,680,230	2,338,186	7,365,899
Bodcaw, light oil		1938	1,411,450	†	†4,412,906
De Soto-Red River	De Soto, Red River	1912	371,105	334,600	58,432,090
Elm Grove	Bossier, Caddo	1916	112,580	97,800	3,763,290
Haynesville	Claiborne	1919	982,810	719,280	71,631,940
Holly	De Soto	1930	28,545	†	†991,465
Homer	Claiborne	1919	1,021,135	789,850	71,074,095
Lisbon	Claiborne, Lincoln				
		Oil: 1936	1,490,355	1,094,315	10,005,635
Nebo* (Jena)	La Salle	1940	52,100	*129,549	181,649
Olla	La Salle	1940	972,530	5,129,551	6,102,081
Pleasant Hill	Sabine	1927	33,815	36,205	1,626,590
Rodessa	Caddo	1930	6,904,220	5,746,000	73,709,140
Sarepta	Bossier, Webster	1922	60,998	†	†1,645,587
Shongaloo	Webster				
Shallow		1921	5,692	†	†121,807
Deep		1938	20,043	†	†107,689
Shreveport	Caddo	1938	1,548,125	1,210,600	4,737,600
Sligo	Bossier	1922	716,265	635,800	2,289,960
Sugar Creek	Claiborne	1931	217,970	484,924	1,063,049
Urania	Grant, La Salle, Winn	1925	893,465	550,000	25,705,050
White Sulphur Sp'gs.	La Salle	1928		†	†12,290
Zwolle	Sabine	1928	612,535	372,120	15,905,900
Others				2,205,539	2,205,539
Total North Louisiana		1904	24,381,760	25,386,995	559,650,755

* Data available for December only. † Data for 1941 not available.

South Louisiana

Abbeville	Vermilion	1937	144,500	129,737	657,446
Anse La Butte	St. Martin	1905	412,000	1,464,505	2,794,624
Bancroft	Beauregard	1938	1,018,000	984,777	2,923,829
Barataria	Jefferson	1939	429,350	968,977	1,415,568
Bateman Lake	St. Mary	1937	308,200	224,927	929,791
Bay Baptiste	Terrebonne	1939		*	2,300
Bayou Blue	Iberville	1929	147,000	625,990	876,162
Bayou Bouillion	St. Martin	1928	21,890	10,475	530,123
Bayou des Allemands	St. Charles	1937	91,583	131,570	381,841
Bayou des Glaises	Iberville	1940	4,300	*	4,300
Bayou Mallet	Acadia	1936	82,500	92,787	430,582
Bayou Pigeon	Iberia	1940	98,625	273,993	372,618
Bayou Sale	St. Mary	1941		96,735	96,735
Bay St. Elaine	Terrebonne	1937	149,642	259,715	673,988
Big Lake	Cameron	1936		*	74,560
Black Bayou	Cameron	1929	1,007,000	843,195	8,894,195
Bosco	Acadia	1934	1,718,000	1,669,775	22,281,775
Caillou Island	Terrebonne	1930	2,493,000	1,945,310	31,030,510
Cameron Meadows	Cameron	1931	665,000	901,975	8,349,975
Cankton	St. Landry	1937	8,700	*	38,670
Chacahoula	La Fourche	1938	467,850	457,145	1,320,868
Chalkley	Cameron	1938	950,000	1,648,805	2,826,637
Charenton	St. Mary	1936	2,724,000	2,092,298	8,579,298
Cheneyville	Rapides	1935	960,375	1,092,535	2,846,968
China	Jefferson Davis	1940	3,508	5,638	9,146
Choctaw	Iberville	1931	436,500	535,390	3,567,064
Creole	Cameron	1938	579,058	413,825	1,724,563
Darrow	Ascension	1932	750,000	708,325	5,013,567
Delarge	Terrebonne	1938	59,500	36,450	145,143
Delta Duck	Plaquemines	1941		32,970	32,970
Delta Farms	La Fourche	1940	28,639	133,485	162,124
Dog Lake Bayou	Terrebonne	1929	301,350	458,705	2,407,055
Edgerly	Calcasieu	1913	95,500	152,681	8,493,717
Eola	Avoyelles	1939	3,935,000	3,664,957	8,542,957
Erath	Vermilion	1940	10,230	136,234	146,464
Fausse Point	Iberia	1937	22,000	43,321	92,118
Four Isle†	Terrebonne	1927			290,697
Garden Island Bay	Plaquemines	1935	1,106,000	1,171,170	4,709,170
Gibson	Terrebonne	1937	1,335,000	1,358,415	5,258,415
Gillis	Calcasieu	1934	1,417,615	1,503,418	21,289,257
Golden Meadows	La Fourche	1938	4,074,000	4,675,326	9,489,326
Grand Bay	Plaquemines	1938	1,168,000	1,946,125	3,660,125
Grand Lake	Cameron	1939	923,000	1,682,010	3,153,071

South Louisiana—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Gueydan	Vermilion	1932	145,000	520,845	1,712,845
Hackberry, East	Cameron	1927	1,613,390	1,769,515	26,613,066
Hackberry, Old (or West)	Cameron	1928	1,680,000	2,172,595	10,243,333
Happytown	St. Martin	1939	113,600	167,620	295,048
Horse Shoe Bayou	St. Mary	1937	428,000	443,794	1,460,116
Iowa	Calcasieu	1931	3,475,000	3,332,377	46,475,377
Jeanerette	St. Mary	1935	1,203,000	1,007,985	9,729,985
Jefferson Island	Iberia	1938	340,000	352,470	867,821
Jennings	Acadia	1901	5,505,000	5,239,684	76,836,684
Kenilworth	St. Bernard	1939	76,000	32,390	116,357
La Fitte	Jefferson	1934	4,602,000	4,478,825	27,167,825
La Fourche Crossing	La Fourche	1939	197,200	238,611	471,535
Lake Barre	Terrebonne	1929	317,000	249,690	17,354,690
Lake Chicot	St. Martin	1941		22,075	22,075
Lake Hermitage	Plaquemines	1934	9,200	9,900	159,830
Lake Long	La Fourche	1937	491,000	455,758	1,736,564
Lake Mongoulois	St. Martin	1939	4,000	*	8,731
Lake Pelto	Terrebonne	1929	512,032	373,414	2,333,849
Lake Salvador	St. Charles	1940	40,000	561,785	601,785
Lake Side (Lowry)	Cameron	1941		2,290	2,290
Lake Washington	Plaquemines	1931	191,000	193,990	3,065,843
La Pice	St. James	1939	40,120	130,990	174,812
La Place	St. John the Baptist	1939	26,660	*	30,832
Leeville	La Fourche	1931	1,135,000	1,618,820	23,892,820
Lirette	Terrebonne	1937	24,000	*	63,000
Little Chenier		1940	5,150	1,550	6,700
Lockport	Calcasieu	1924	309,000	408,414	15,601,414
Neale	Beauregard	1940	330,000	821,355	1,151,355
New Iberia	Iberia	1917	3,076,000	2,750,432	23,837,294
Nibletts	Jefferson Davis	1940	5,290		5,290
North Crowley	Acadia	1937	1,602,000	2,066,560	4,887,560
North Elton	Allen	1939	8,000	*	12,120
Northeast-Tepetate	Acadia	1938	29,195	27,020	123,377
Paradis	St. Charles	1939	350,000	958,250	1,326,019
Pine Prairie	Evangeline	1912		179,682	199,682
Plumb Bob	St. Martin	1939	112,980	157,755	291,730
Port Allen	West Baton Rouge	1941		77,440	77,440
Port Barre	St. Landry	1929	810,000	1,026,954	9,699,954
Potash (Deep)	Plaquemines	1939	260,000	616,170	1,003,180
Potash (Shallow)	Plaquemines	1938			
Quarantine Bay	Plaquemines	1937	1,585,000	2,182,079	4,930,079
Raceland	La Fourche	1938	462,650	531,790	1,741,335
Ritchie	Acadia	1940	3,600	136,050	139,650
Roanoke	Jefferson Davis	1934	965,000	635,785	10,059,785
St. Gabriel	Iberville	1941		425,945	425,945
St. Martinsville	St. Martin	1935	124,320	105,980	1,230,410
Section 28	St. Martin	1941		12,250	12,250
Sorrento	Ascension	1928	70,600	69,280	1,130,067
South Crowley	Acadia	1939	15,150	116,520	133,456
South Elton	Jefferson	1937	20,790	11,801	57,361
South Houma	Terrebonne	1938	165,540	152,754	478,124
South Jennings	Jefferson Davis	1937	55,000	*	97,888
South Roanoke	Jefferson Davis	1937	377,000	324,075	1,035,560
Starks	Calcasieu	1927	158,000	165,410	3,251,410
Stella	Plaquemines	1940	18,760	176,230	194,990
Sulphur	Calcasieu	1926	970,000	1,040,135	15,999,035
Sweet Lake	Cameron	1927	532,000	727,250	5,472,250
Tepetate	Acadia	1935	1,656,000	1,447,880	10,735,880
Timbalier Bay	La Fourche	1938	67,300	64,420	220,950
University	E. Baton Rouge	1938	3,496,000	3,617,103	8,727,103
Vacherie (Convent)	St. James	1940	17,124	37,405	94,470
Valentine	La Fourche	1937	877,000	598,080	5,261,080
Venice	Plaquemines	1937	847,200	1,099,640	3,134,143
Vermilion Bay	Iberia	1939	78,000	123,361	255,772
Ville Platte (Shallow)	Evangeline	1937	4,493,000	6,542,238	15,240,238
Ville Platte (Wilcox)	Evangeline	1939			
Vinton	Calcasieu	1910	306,000	364,345	43,403,345
Welch	Jefferson Davis	1903	8,197	46,178	644,137
West Bay	Plaquemines	1940	4,000	345,895	349,895
West Cote Blanche Bay	St. Mary	1940	103,650	336,160	439,810
West Gueydan	Vermilion	1938	234,889	195,105	582,307
West Lake Verret	St. Martin	1938	170,873	581,365	888,149
West Mermentau	Jefferson Davis	1940	6,430	*	6,430
Westwego	Jefferson	1941		30,100	30,100
White Castle	Iberville	1929	896,000	909,205	5,186,205
White Lake, East	Vermilion	1940	12,000	108,485	120,485
Woodlawn	Jefferson Davis	1938	887,249	1,131,385	2,682,980
Others		1941		22,923	22,923
Total South Louisiana		1901	78,806,554	91,455,283	630,587,537

* Data for 1941 not available. † Abandoned.

Michigan

Adams	Arenac	1937	313,011	1,120,791	1,554,177
Akron	Tuscola	1938	700	75,930	91,251
Allegan	Allegan	1938		*	574
Bangor	Van Buren	1939	94,450	119,975	292,097
Beaverton (North)	Gladwin	1935	35,012	26,112	626,607
Beaverton (South)	Gladwin	1936	62,480	123,617	234,396
Bentley	Gladwin	1937	125,041	99,063	636,833
Birch Run	Saginaw	1934	9,895	9,926	190,536
Bloomer	Montcalm	1936		*	814
Bloomingdale	Van Buren	1938	1,031,980	549,162	5,435,954
Bloomfield	Huron	1940	71	*	71
Blue Lake	Muskegon	1941		26	26
Broomfield	Isabella	1934	461,799	287,696	3,889,476
Buckeye (South)	Gladwin	1936	181,014	101,024	3,660,317

Michigan—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Bushnell	Montcalm	1936	.....	*	4,035
Casco	Allegan	1940	309	2,300	2,609
Cass	Cass	1930	.....	*	1,108
Clare City	Clare	1938	3,875	4,897	16,183
Clayton	Arenac	1936	410,161	243,819	3,451,467
Columbia	Van Buren	1938	487,483	160,441	1,862,262
Crystal	Montcalm	1935	83,054	76,742	7,148,556
Currie	Isabella	1936	7,312	6,800	150,110
Dalton	Muskegon	1940	692	804	1,496
Deerfield	Monroe	1935	108,585	82,174	234,324
Diamond Springs	Allegan	1938	79,548	29,200	684,618
Dorr	Allegan	1938	31,161	22,277	263,357
Edenville	Midland	1938	109,836	65,917	1,095,183
Edmore	Montcalm	1933	18,470	15,038	419,365
Fremont	Isabella	1938	.....	*	2,771
Fremont	Saginaw	1937	170	*	1,601
Geneva	Van Buren	1940	3,935	6,533	10,468
Geneva	Midland	1935	3,091	*	60,996
Gibson	Bay	1936	.....	*	3,573
Grout	Gladwin	1940	3,877	9,125	13,002
Gratiot	Gratiot	1929	.....	*	228
Hatton	Clare	1941	.....	7,865	7,865
Hamilton	Clare	1940	10,344	*	10,344
Headquarters	Roscommon	1941	.....	322,965	322,965
Holland	Ottawa	1940	8,899	2,604	11,503
Hope	Barry	1940	1,926	1,320	3,146
Hopkins	Allegan	1939	33,902	17,157	110,093
KawKawlin	Bay	1938	15,850	180,194	222,299
Lakefield	Saginaw	1937	1,209	715	4,445
Larkin	Midland	1935	71	*	6,940
Leaton	Isabella	1929	137,058	104,415	2,855,247
Lincoln	Midland	1939	.....	*	71
Mason	Mason	1934	.....	*	228
Mill Lake	Van Buren	1938	55,507	29,000	315,784
Monterrey	Allegan	1938	44,278	25,117	347,528
Monterey Sec. 24†	Allegan	1938	.....	*	176
Mt. Haley	Midland	1935	1,610	1,146	29,991
Mt. Pleasant	Isabella	1928	408,782	362,358	21,499,221
Muskegon	Muskegon	1927	38,570	29,364	6,685,705
Muskrat Lake	Van Buren	1941	.....	115,000	115,000
New Salem	Allegan	1938	1,051,859	490,494	2,858,983
Niles (Ontwa)	Berrien	1940	228	*	228
North Buckeye	Gladwin	1937	823,768	564,893	14,336,606
North Overisel	Allegan	1940	278,230	109,800	388,030
Oceana	Oceana	1932	.....	*	116,275
Ogemaw (West Branch)	Ogemaw	1933	492,917	415,292	4,566,205
Otsego	Allegan	1938	.....	*	134
Otisville	Genesee	1941	.....	499	499
Overisel	Allegan	1938	83,056	56,600	549,703
Pine	Montcalm	1938	5,514	3,291	26,780
Porter	Midland	1931	1,234,469	1,142,309	31,680,388
Porter	Van Buren	1939	.....	1,309	1,470
Reed City	Osceola	1940	1,917	2,758,553	2,760,470
Richfield	Roscommon	1941	.....	1,338	1,338
Richland	Saginaw	1935	.....	*	1,871
Saginaw	Saginaw	1925	23,668	21,559	1,372,615
Salem	Allegan	1937	404,411	241,500	2,733,519
Secord	Gladwin	1937	1,357	*	12,024
Sherman	Isabella	1940	716	*	716
Shiawassee	Shiawassee	1930	.....	*	236
S. Overisel	Allegan	1939	662,566	247,433	947,046
S. Tallmadge	Ottawa	1939	34,775	71,900	109,270
Tallmadge	Ottawa	1940	520	*	520
Trowbridge	Allegan	1938	19,098	53,029	84,259
Van Horn	Clare	1938	4,422,614	1,949,509	12,166,549
Vernon	Isabella	1930	154,067	138,119	4,264,563
Walker	Kent	1938	4,217,424	1,528,600	8,568,104
Winfield	Montcalm	1936	2,035	31,541	42,529
West Hopkins	Allegan	1941	.....	71,260	71,260
Winterfield (McBain)	Clare	1940	8,385	1,103,502	1,111,887
Wise	Isabella	1938	848,166	377,173	1,502,984
Wisner	Tuscola	1936	.....	*	543
Wyoming Park	Kent	1939	54,071	21,109	87,906
Yost	Midland	1932	509,944	370,458	6,481,032
Zeeland	Ottawa	1939	2,322	*	8,617
Total Michigan	.....	....	19,753,015	16,209,670	161,444,151

* Indicates field abandoned or isolated well now grouped under different field.
† Includes East Monterey

Mississippi

Cary	.....	1941	.....	4,400	4,400
Tinsley	Yazoo	1939	4,043,424	14,839,400	19,036,724
Pickens	Yazoo	1940	281,097	216,300	497,397
Pickens-Sharpsburg	Yazoo	1941	.....	6,500	6,500
Total Mississippi	.....	....	4,324,521	15,066,600	19,545,021

Montana

Border (Red Coulee)	Toole	1930	28,838	21,141	1,081,274
Cat Creek	Petroleum	1920	175,298	170,218	15,010,477
Cut Bank	Glacier	1929	4,109,663	4,955,113	25,957,259
Dry Creek	Carbon	1929	166,737	167,452	1,852,616
Elk Basin	Carbon	1915	15,931	16,752	1,020,536
Kevin-Sunburst	Toole	1922	1,884,170	1,696,440	39,570,557
Lake Basin	Stillwater	1927	19,620	.....	444,359

Montana—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Pondera	Pondera, Teton	1928	301,273	259,603	5,293,020
Sweetgrass Hills (Whitlash)	Liberty, Toole	1917	8,289	.....	100,962
Total Montana	.....	....	6,713,819	7,286,719	90,961,060

Nebraska

Barada	.....	1941	.....	28,150	28,150
Falls City	Richardson	1939	244,700	1,723,850	1,969,550
Shubert	Richardson	1940	2,000	65,400	67,400
Total Nebraska	.....	....	246,700	1,817,400	2,065,100

New Mexico

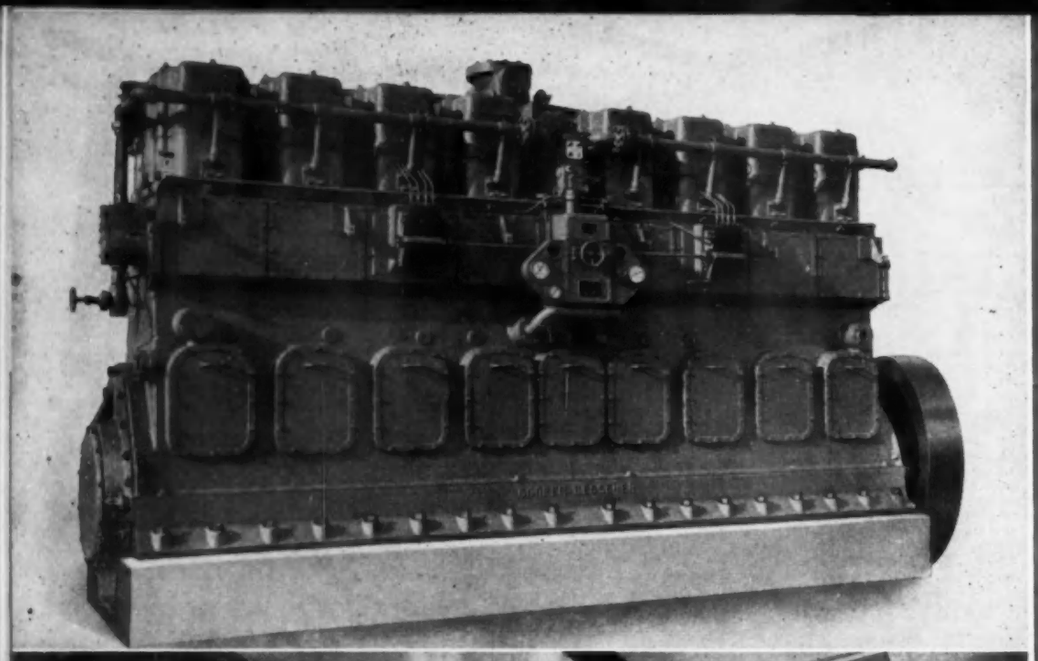
Arrowhead	Eddy	1940	1,065,024	1,414,545	2,997,237
Artesia	Eddy	1923	266,900	157,174	5,913,699
Aztec	San Juan	1923	862	669	38,844
Barber	Eddy	1936	30,120	68,166	142,797
Black River	Eddy	1937	.....	.....	3,509
Caprock	Lea	1940	500	1,129	1,629
Comanche	Chaves	1939	3,849	240	6,970
Continental-Skaggs	Lea	1937	24,350	23,133	125,483
Cooper	Lea	1934	1,155,150	1,031,020	13,170,797
Corbin	Lea	1939	9,503	15,768	25,710
Dayton	Eddy	1940	4,209	28,590	32,799
Eaves	Lea	1936	254,003	289,016	2,210,442
Eunice	Lea	1928	6,561,864	6,639,571	53,702,442
Getty	Eddy	1929	18,705	53,196	461,920
Grayburg-Jackson	Eddy	1929	1,738,300	1,622,172	10,347,472
Halfway	Lea	1940	64,011	110,803	174,814
Hardy	Lea	1936	1,099,223	781,546	3,924,592
High Lonesome	Eddy	1939	10,895	12,057	23,292
Hobbs	Lea	1929	3,803,126	3,607,135	98,105,752
Hogsback	San Juan	1924	74,000	72,880	2,137,880
Hospah	McKinley	1927	.....	.....	32,065
Inglefield	Lea	1935	.....	.....	2,000
Jal	Lea	1928	166,026	128,230	6,687,549
Langlie	Lea	1935	1,594,218	1,381,511	6,766,286
Leo	Eddy	1939	35,972	16,816	55,751
Leonard	Eddy	1929	283,689	308,274	1,318,963
Loco Hills	Eddy	1939	1,883,025	2,316,263	4,540,780
Lynch	Lea	1929	167,507	150,817	6,064,716
Lynn	Lea	1936	303,214	349,642	1,624,166
Maljamar	Lea	1926	1,156,663	1,639,069	4,425,732
Mattix	Lea	1935	1,695,805	1,415,599	6,138,263
McMillan	.....	1941	.....	81	81
Monument	Lea	1935	6,889,973	6,511,114	45,977,893
North Lynch	Lea	1929	10,822	8,874	1,031,748
North Maljamar	Lea	1939	772	921	2,519
Penrose	Lea	1935	1,596,522	1,209,200	6,994,099
Rattlesnake	San Juan	1924	143,000	110,734	4,537,801
Red Lakes	Eddy	1924	92,487	141,955	497,853
Rhodes	Lea	1935	58,016	144,539	396,062
Robinson	Eddy	1926	87,911	53,714	387,053
Salt Lake	.....	1941	.....	11,154	11,154
Shugart	Eddy	1938	165,687	214,903	480,590
Skelly	Lea	1935	585,986	541,225	2,693,222
South Eunice	Lea	1935	831,016	966,121	4,885,540
South Lovington	Lea	1939	478,396	516,060	1,172,624
South Maljamar	Lea	1940	9,075	21,772	30,847
T. & P. State	Lea	1929	.....	.....	316,352
Table Mesa	San Juan	1926	33,741	36,210	573,941
Vacuum (Fisher-Lowrie)	Lea	1929	4,738,000	4,794,997	13,200,623
West Eunice (Empire)	Lea	1928	91,450	159,870	310,820
Total New Mexico	.....	....	39,289,477	39,078,466	314,705,173

Oklahoma Summary

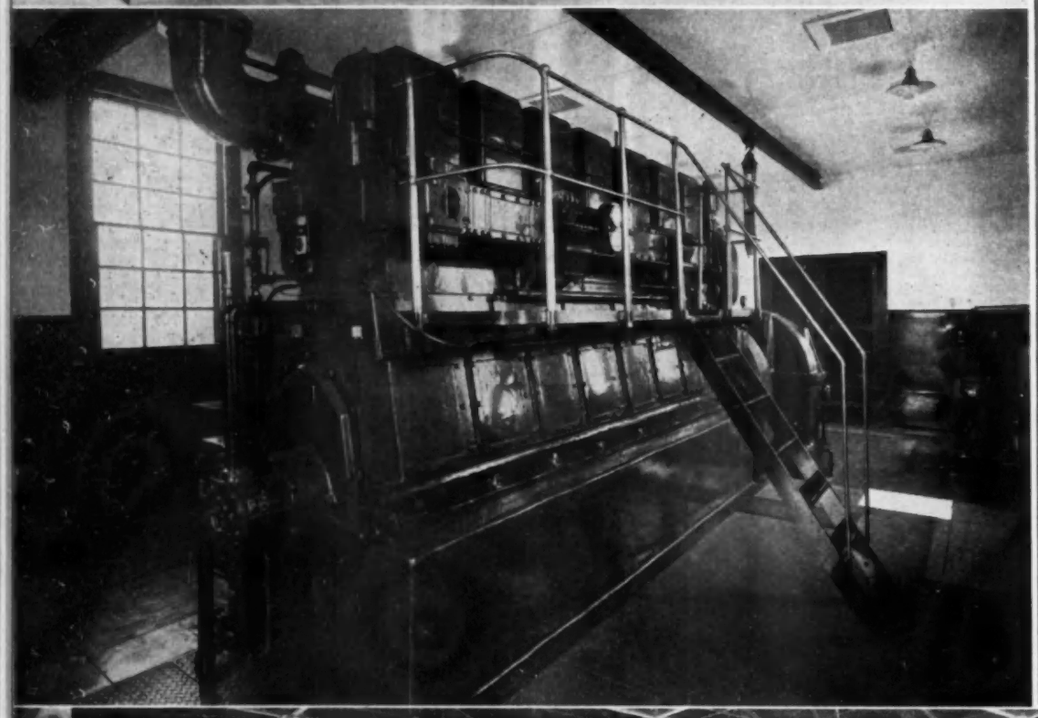
DISTRICT	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Central Oklahoma	1914	6,722,975	7,139,600	168,024,980
East Central Oklahoma	1906	4,095,225	4,075,800	307,168,119
East Central—Creek County	1905	8,316,853	8,461,700	774,525,997
Northern Oklahoma	1916	9,734,127	9,846,900	325,269,271
Oklahoma City Area	....	38,197,415	34,009,200	576,152,709
Osage County	1904	11,753,480	12,192,800	582,693,420
Seminole Area	1916	39,732,074	39,841,200	1,154,470,342
Southeastern Oklahoma	1923	10,057,605	9,627,200	132,247,288
Southwestern Oklahoma	1913	16,035,372	21,751,000	550,498,287
Northeastern Oklahoma	....	6,279,942	6,311,600	348,680,135
Total Oklahoma	....	150,929,068	153,257,000	4,919,730,548

CENTRAL OKLAHOMA

Chandler	Lincoln	1924	318,602	261,800	11,919,602
Davenport	Lincoln	1924	165,012	161,600	11,967,976
Davenport, North	Lincoln	1941	.....	4,300	4,300
Laffoon	Lincoln	1932	249,359	196,300	1,872,101
Sac & Fox	Lincoln	1924	706,879	401,500	3,084,122

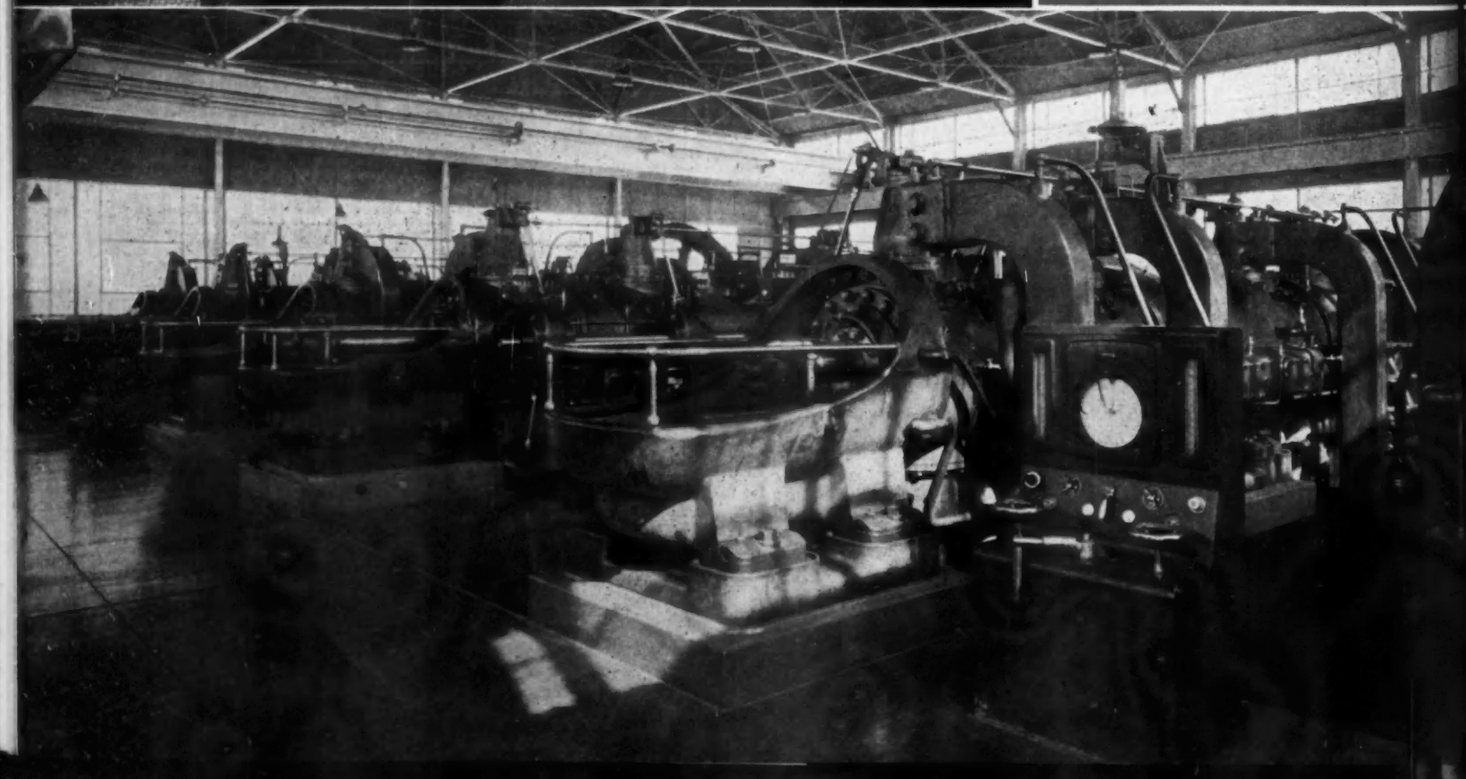


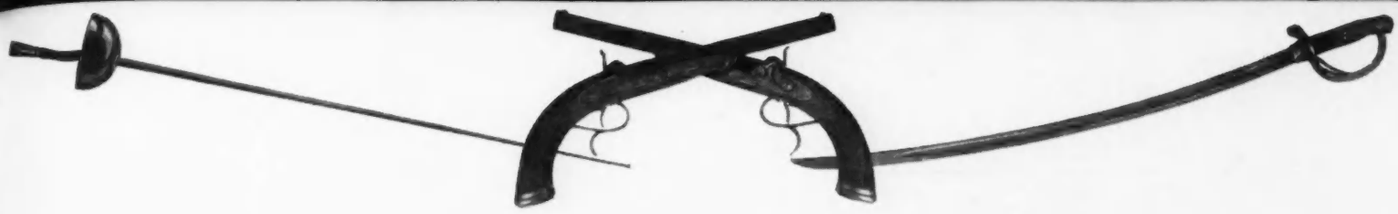
A Type LS Diesel Engine, destined for generating service in a pipeline pumping station. Rated 1,000 horsepower.



A Type JS, seven-cylinder diesel engine driving a pipeline pump in the Susank, Kansas, station of Continental Oil Company.

Below — Three Cooper-Bessemer Twin-tandem horizontals in Michigan Gas Transmission Company's Edgerton, Ind. plant.





GENTLEMEN, CHOOSE YOUR WEAPONS!

THE battle is on in every vital defense industry! . . . and petroleum is no exception! Whether it's building battleships, or transmitting gas . . . making gun carriages, or pumping oil through pipelines . . . it behooves us all to look to our weapons!

Cooper-Bessemer gas and diesel engines and compressors have served your industry since its inception. The engineering experience behind them goes back over 108 years of machinery building . . . has been baptized in the fire of several wars and national crises. There is no finer oil-field machinery built for today's emergency than Cooper-Bessemer Engines and Compressors!

Perhaps you like rugged horizontals, or you may prefer the multi-cylinder verticals. Then again, you may choose the modern V-angle. They're all good weapons! Take your choice of the types, but be sure they're dependable, able-to-take-it Cooper-Bessemers!

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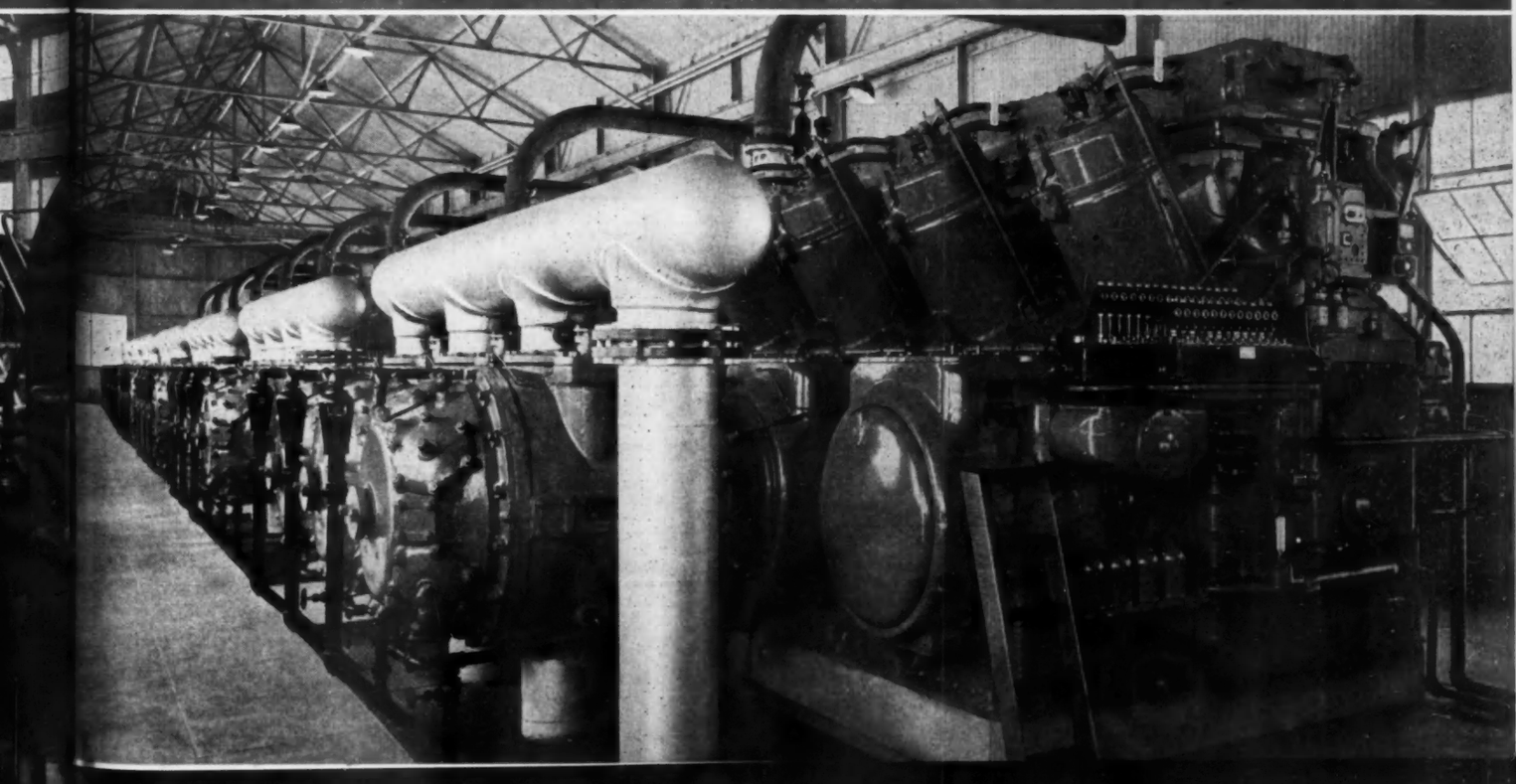
1501 Arcade Building, St. Louis, Missouri

A battery of Type G-MV, 8-cylinder, 800 horsepower compressors, serving El Paso Natural Gas Company.



Oklahoma—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
CENTRAL OKLAHOMA—Continued					
Wilzetta & South Wilzetta	Lincoln	1934	202,191	126,500	1,221,212
Evans	Lincoln	1941	.....	11,300	11,300
Lauderdale	Pawnee	1915	293,465	257,700	13,389,820
Coyle	Payne	1938	632,938	1,467,500	2,510,033
Neban, N.E.	Payne	1941	.....	7,600	7,600
Orlando, East	Payne	1941	.....	59,300	59,300
Ramsey	Payne	1938	1,376,888	1,548,800	4,945,212
Yale-Quay	Payne	1914	539,225	548,500	22,105,166
Unclassified	.....	....	2,238,416	2,086,900	94,927,236
Total	.....	....	6,722,975	7,139,600	168,024,980
EAST CENTRAL OKLAHOMA					
Okemah, North	Okfuskee	1941	.....	29,050	29,050
Okemah, West	Okfuskee	1941	.....	39,300	39,300
Weleetka	Okfuskee	1913	203,162	242,000	5,986,684
Bald Hill	Okmulgee	1908	442,737	419,700	49,309,278
Morris	Okmulgee	1907	144,168	136,600	24,922,842
Pollyanna	Okmulgee	1921	139,694	134,300	2,509,209
Bird Creek	Tulsa	1906	455,112	490,700	70,276,821
Turley	Tulsa	1914	135,067	120,050	5,795,014
Unclassified	.....	....	2,575,285	2,464,100	148,299,921
Total	.....	....	4,095,225	4,075,800	307,168,119
EAST CENTRAL—CREEK COUNTY					
Bristow	Creek	1916	350,867	310,100	37,490,477
Cushing	Creek	1912	3,350,713	3,322,500	359,447,310
Depew	Creek	1915	312,975	318,430	36,344,155
Glenn Pool	Creek	1905	1,241,142	1,308,600	220,579,477
Manford (Deep and Shallow)	Creek	1922	374,464	359,050	6,002,995
Olive	Creek	1914	193,908	149,200	4,849,755
Sinclair	Creek	1941	.....	9,700	9,700
Slick	Creek	1913	420,188	389,000	33,409,624
Wilcox	Creek	1919	182,779	161,200	3,817,676
Unclassified	.....	....	1,879,817	2,133,920	72,574,828
Total	.....	....	8,316,853	8,461,700	774,525,997
NORTHERN OKLAHOMA					
Garber	Garfield	1916	626,899	619,600	55,133,656
Lamont	Grant	1937	213,520	177,700	733,815
Braman & North Braman	Kay	1924	460,458	371,800	22,894,911
Hubbard	Kay	1924	182,533	164,100	8,387,891
Tonkawa	Kay	1921	623,715	632,100	121,365,242
Vernon, South	Kay	1941	.....	600	600
Crescent	Logan	1933	767,317	576,100	13,457,755
Guthrie	Logan	1941	.....	752,600	752,600
Novina	Logan	1941	.....	500	500
Billings-Wilcox & (Shallow)	Noble	1917	2,210,792	2,275,800	17,465,017
Lucien	Noble	1932	2,735,195	2,066,800	28,452,158
Lucien, North	Noble	1936	232,702	114,800	940,140
Unclassified	.....	....	1,684,996	2,094,400	55,684,986
Total	.....	....	9,738,127	9,846,900	325,269,271
OKLAHOMA CITY AREA					
Moore	Cleveland	1936	598,972	326,600	8,302,226
Britton	Oklahoma	1935	209,357	138,900	2,418,398
Edmond	Oklahoma	1930	1,485,968	1,223,600	18,035,380
Oklahoma City	Oklahoma	1928	35,806,489	32,183,700	546,750,182
Harper	Oklahoma	1941	.....	15,500	15,500
Kune	Oklahoma	1941	.....	5,800	5,800
Unclassified	.....	....	96,629	115,100	625,223
Total	.....	....	38,197,415	34,009,200	576,152,709
OSAGE COUNTY					
Atlantic	Osage	1924	314,455	298,800	*
Avant	Osage	1904	676,862	695,900	*
Burbank	Osage & Kay	1920	2,850,210	3,281,500	205,158,428
Burbank, South: Original Discovery		1926	.....	.....	.....
Extension		1934	2,941,156	2,779,800	30,820,476
Dalton, South	Osage	1941	.....	20,600	20,600
Flat Rock	Osage	1906	291,058	275,400	*
Naval Reserve	Osage	1933	1,285,909	1,088,900	17,010,826
Osage City	Osage	1904	268,806	273,900	*
Osage-Hominy	Osage	1917	218,286	243,200	*
Wildhorse	Osage	1912	281,079	298,400	*
Unclassified	.....	....	2,625,659	2,936,400	329,683,090
Total	.....	....	11,753,480	12,192,800	582,693,420

* Data not available; included below in "Unclassified".

Oklahoma—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
SEMINOLE AREA					
Adams	Hughes	1936	270,219	265,000	1,323,785
Fish	Hughes	1934	1,550,559	1,359,300	17,164,234
Holdenville, West	Hughes	1916	251,370	213,500	5,123,966
Papoose	Hughes	1923	230,298	207,000	23,365,932
Castle	Okfuskee	1941	.....	74,500	74,500
Castle, North	Okfuskee	1941	.....	20,800	20,800
Castle, South	Okfuskee	1941	.....	31,050	31,050
Dill	Okfuskee (West Half)	1931	645,060	1,426,400	4,319,673
Olympic	Okfuskee	1934	740,081	597,900	11,392,558
Rusk	Okfuskee	1941	.....	116,100	116,100
Avoca	Pottawatomie	1938	368,432	619,400	1,211,579
Gray	Pottawatomie	1932	297,024	366,800	4,357,780
Hatulke	Pottawatomie	1941	.....	189,400	189,400
King, West	Pottawatomie	1939	197,622	5,800	231,162
Maud	Pottawatomie	1938	203,168	223,700	12,085,439
Maud, West	Pottawatomie	1941	.....	286,200	286,200
Shawnee	Pottawatomie	1934	731,615	473,400	2,846,902
St. Louis	Pottawatomie	1927	9,947,446	6,529,500	154,559,161
St. Louis, East	Pottawatomie	1941	.....	118,600	118,600
St. Louis, North	Pottawatomie	1941	.....	349,300	349,300
Tecumseh, East	Pottawatomie	1941	.....	319,700	319,700
Tecumseh, Lake	Pottawatomie	1941	.....	485,800	485,800
Allen (Deep)	Seminole	1929	1,920,551	1,571,700	51,416,944
Bethal, N. E.	Seminole	1941	.....	4,700	4,700
Bethal, West	Seminole	1941	.....	56,600	56,600
Bowlegs	Seminole	1926	2,468,591	2,134,200	118,920,240
Cromwell	Seminole	1923	1,057,316	1,026,000	57,118,700
Dill, South	Seminole	1941	.....	91,200	91,200
Earlsboro	Seminole	1926	1,500,576	1,344,300	125,465,285
Earlsboro, North	Seminole	1936	1,234,255	1,243,555	5,127,137
Earlsboro, South	Seminole	1930	191,660	181,800	8,807,883
Fish, West	Seminole	1941	.....	8,030	8,030
Grayson	Seminole	1935	377,990	271,600	1,857,282
Harjo	Seminole	1941	.....	2,400	2,400
Homestake	Seminole	1941	.....	400	400
Jennings	Seminole	1941	.....	6,600	6,600
Keokuk	Seminole	1933	1,097,740	1,028,900	11,587,181
Konawa	Seminole	1929	399,544	358,400	16,212,501
Konawa, South	Seminole	1938	214,379	766,500	1,026,918
Little River	Seminole	1927	2,414,979	2,269,570	111,745,451
Little River, East	Seminole	1928	244,797	232,100	16,719,286
Little River, North	Seminole	1941	.....	137,600	137,600
Little River, West	Seminole	1938	211,124	202,900	822,110
Rosanna	Seminole	1924	200,388	151,500	1,741,983
Sasakwa	Seminole	1927	423,416	329,900	10,939,661
Searight	Seminole	1926	428,854	396,800	34,262,486
Seminole City	Seminole	1926	2,502,947	2,242,900	128,848,091
Seminole, East	Seminole	1926	427,373	328,900	8,233,316
Seminole, West	Seminole	1934	491,094	696,400	13,195,655
Shepard	Seminole	1941	.....	2,600	2,600
Sylvian	Seminole	1941	.....	3,100	3,100
Trauch (Deep and Shallow)	Seminole	1937	235,626	203,300	1,704,218
Wewoka	Seminole	1923	334,599	336,500	40,119,119
Wewoka Townsite	Seminole	1924	159,397	136,100	3,165,248
Unclassified	.....	....	5,761,984	7,794,995	146,155,796
Total	.....	....	39,732,074	39,841,200	1,154,470,342
SOUTHEASTERN OKLAHOMA					
Cumberland	Marshall	1940	416,651	2,542,600	2,959,251
Beebe	Pontotoc	1923	1,766,083	1,481,500	12,003,447
Fitts	Pontotoc	1933	6,081,819	4,223,400	93,182,719
Jesse	Pontotoc	1935	782,858	708,500	4,958,390
Unclassified	.....	....	1,010,194	671,200	19,143,481
Total	.....	....	10,057,605	9,627,200	132,247,288
SOUTHWESTERN OKLAHOMA					
Apache	Caddo	1941	.....	273,800	273,800
Cement	Caddo	1917	2,475,794	3,343,400	22,874,079
Fox (Old. Prod. & Deep)	Carter	1935	466,038	398,900	14,599,787
Healdton	Carter	1913	3,177,702	3,085,700	190,552,287
Hewitt	Carter	1919	1,796,975	4,859,900	92,819,385
Sholem-Alechem	Carter	1923	1,002,696	902,300	37,874,696
Tatums	Carter	1927	668,474	611,000	15,081,498
Tussy	Carter	1933	519,629	1,312,500	4,170,137
Walters	Cotton	1916	331,881	303,300	25,427,952
Robberson	Garvin	1921	352,209	319,000	15,179,198
Knox	Grady	1924	714,649	643,900	15,006,572
Altus	Jackson	1934	362,504	340,500	1,538,937
Tipton	Jackson	1935	368,130	216,400	1,675,730
Oscar	Jefferson	1924	540,235	451,100	10,204,030
Comanche	Stephens	1918	199,723	184,300	10,399,691
Empire	Stephens	1920	522,591	639,500	13,985,742
Milroy	Stephens	1916	205,790	226,300	3,790,766
Velma	Stephens	1917	265,205	296,700	6,105,081
Frederick and West Frederick	Tillman	1937	503,125	965,200	2,185,656
Unclassified	.....	....	1,562,022	2,377,300	66,753,263
Total	.....	....	16,035,372	21,751,000	550,498,287

ROTARY DRILLING RIG

These three Fairbanks-Morse Model 35-6 cylinder 8¾ x 10½ Diesel Engines compounded develop 975 H.P. peak hoist rating and 600 H.P. continuous duty at the rated speed of 475 R.P.M. maximum.

Flexibility of operation is the outstanding characteristic of the 4S-JM Transmission. Engines and pumps can be operated individually or in compound. Hydraulic compounding of pumps is made possible by a unique clutching arrangement in the Transmission.

• COMPOUNDING TRANSMISSION FOR GREATER FLEXIBILTY
• SHORTER DRIVES FOR HIGHER EFFICIENCY
• ONLY THE DRAWWORKS IS ON DERRICK FLOOR

The 4S-JM type drilling rig is a combination of our Emsco EB-8 speed drawworks, Emsco Type K Reverse and Friction Clutch, Emsco 4S-JM—3 engine, 4 shaft Transmission, one each 425 H.P. (8 x 20) and 250 H.P. (7¾ x 16) Gardner-Denver Power Slush Pump and 3 Fairbanks-Morse Model 35-6 Cylinder 8¾ x 10½ Diesel Engines; all assembled in a manner that assures their most efficient operation and best performance.

The two step substructure design employed in this development makes it necessary to raise only the drawworks to the derrick floor level. The rest of the machinery; engines, transmission, and slush pumps with the exception of the reverse clutch are mounted at ground level. The reverse clutch is mounted on a step of the substructure which supports the drawworks. In this manner shorter and more efficient drives can be employed and vibration is reduced to a minimum.

Fairbanks-Morse Model 35, 8¾ x 10½, 6-cylinder Diesel Engines are used as prime movers on the 4S-JM Rig. These are medium slow speed, heavy duty Diesel Engines, well known in the oil fields for their many years of thoroughly dependable and economical service on rotary drilling rigs.

The 4S-JM Transmission is designed to drive two slush pumps. Recommended for this rig is a 425 H.P. 8 x 20 FXL-FB and a 250 H.P. 7¾ x 16 FXQ-FQ Gardner-Denver Power Slush Pump.

These power pumps, the two largest of the Gardner-Denver's complete line, have been proven by many years of severe oil country service to be very exceptional equipment.

★ ★ ★ ★ ★

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CONTINENTAL

SERVING THE OIL AND GAS INDUSTRIES

Oklahoma—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
NORTHEASTERN OKLAHOMA					
Washington, Nowata, Rogers & Craig Counties		....	6,279,942	6,311,600	348,680,135
Total Northeastern Oklahoma		....	6,279,942	6,311,600	348,680,135

Eastern Texas Summary

East Texas Field		1930	141,023,000	132,517,790	1,702,847,010
Rest of Eastern Texas		1896	28,301,421	28,596,101	540,201,019
Total Eastern Texas		....	169,324,421	161,113,891	2,243,048,029

East Texas Field

East Texas Field	Cherokee, Gregg, Rusk, Smith, Upshur	1930	141,023,000	132,517,790	1,702,847,010

Eastern Texas Outside East Texas Field

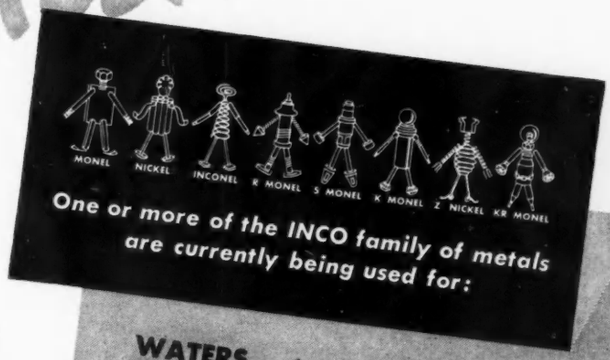
Athens		1941		1,955	1,955
Bassette			*	50,439	*50,439
Bethany	Panola	1938	13,500	**	**32,133
Beulah	Angelina	1938	7,750	**	**21,128
Boggy Creek	Anderson-Cherokee	1927	89,704	74,695	5,034,146
Bolivar			*	2,182	*2,182
Buffalo			*	320	*320
Caddo (Potter)	Marion	1938	137,623	36,094	251,452
Camp Hill	Anderson	1935			293,000
Cayuga	Anderson	1934	3,929,423	4,243,617	22,143,200
Cedar Creek	Limestone	1927		**	**298,000
Chapel Hill	Smith	1940	227,475	153,419	380,894
Collinsville			*	5,826	*5,826
Corsicana-Powell	Navarro	1896	155,500	145,209	16,655,803
Currie	Navarro	1921	36,350	35,621	6,887,452
Flag Lake (Haynes)	Henderson	1937	217,863	77,261	599,854
Ginter	Angelina	1937		6,675	9,675
Grapeland	Houston	1938	32,125	27,472	110,710
Hawkins	Hood	1940	875	1,321,529	1,322,404
Huntington	Angelina	1938	1,400	1,267	8,377
Long Lake	Anderson	1933	747,204	1,316,181	4,766,945
Lott	Falls	1937	5,824	3,303	31,054
Mabank	Henderson	1939	47,500	**	**48,550
Marion Co. Shallow	Marion		*	116,019	*116,019
Mexia	Limestone	1921	570,821	579,895	97,877,619
Nacogdoches	Nacogdoches	1898		2,930	328,930
Navarro Crossing	Houston	1938	184,500	186,259	575,819
Nigger Creek	Limestone	1926		27	3,012,027
Oakwood	Leon	1939	3,000	**	14,241
Opelika	Henderson	1937	2,250	41	33,187
Panola	Panola		*	7,258	*7,258
Pereilla	Houston	1937	5,492	760	31,250
Pickering		1941		1,114	1,114
Pittsburg	Camp	1940	11,125	33,991	45,116
Pleasant Grove		1941		13,781	13,781
Ponta (Lone Star)	Cherokee	1939	6,360	14,899	22,460
Pottsboro			*	1,247	*1,247
Post Oak	Falls	1937	800	920	3,483
Powell	Navarro	1900	633,038	587,842	115,298,006
Redland[1] (Davisville)	Angelina	1939			60
Rice			*	50	*50
Richland	Navarro	1924	7,250	16,403	6,666,392
Rodessa	Cass	1935	6,606,149	4,747,571	48,318,547
Rowe & Baker			*	33,044	*33,044
Rusk	Cherokee	1934			268,264
Satin	Falls	1938			140
Shelbyville	Shelby	1938		324	923
South Bosque	McLennan	1938	4,425	4,528	15,233
Sulphur Bluff	Hopkins	1936	1,521,268	1,589,307	7,981,822
Tacoma	Panola	1934			20,220
Talco	Titus	1936	8,883,127	9,114,099	48,508,717
Tehuacana	Limestone	1940	9,050	18,680	27,730
Trinity	Houston		*	141,377	*141,377
Van	Van Zandt	1929	4,128,857	3,695,282	128,991,460
Waskom	Harrison	1938	17,675	16,193	76,128
Willow Springs	Gregg	1938	8,996	2,640	17,375
Wortham	Freestone	1934	47,122	166,555	22,786,481
Total East Texas Outside East Texas Field		....	28,301,421	28,596,101	540,201,019

[1] Abandoned in 1940.
* Data available for 1941 only.
** No data available for 1941.

North Texas

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Allee	Foard Co. Misc.	1940	10,770	10,353	21,123
Antelope	Clay	1940	44,750	235,400	280,150
Antelope	Jack	....	65,450	‡	‡537,479
Antelope: Mississippian Lime	Jack	1941		6,804	6,804
Anzac Graham		1941		15,262	15,262
Archer County Unclassified	Archer	....	3,055,974	3,187,001	119,795,958
Ball Ranch	Cook	....			1,000
Barnes	Wilbarger	....	5,050	‡	‡232,685
Barry	Clay	....	2,750	‡	‡78,792
Baylor County Unclassified	Baylor	1925	248,143	203,925	4,822,442
Benson		1941		9,038	9,038
Benton-Holmes[1]	Montague	1939	110,863	10,523	145,461
Bindel		1941		16,473	16,473
Blewitt	Archer	1940	13,225	‡	‡13,225
Blount		1941		5,161	5,161
Bolivar	Denton		4,703	‡	‡11,408
Bonita	Montague	1939	152,125	236,173	388,298
Bowers			†	†235,911	†235,911
Boyd	Stonewall	1939	8,302	**	**18,545
Briar Creek		1941		18,026	18,026
Bryson	Jack		1,872,527	925,389	13,782,674
Burkburnett	Wichita	1912	1,835,692	1,806,000	155,957,652
Burns	Clay	1939	67,963	29,603	128,143
Buttram	Jack	....	99,326	‡	‡3,159,875
Buttram-Boyd	Jack	....			10,000
Caddo				†173,141	†173,141
Canyon	Archer	1939	38,775	‡	‡91,032
Canyon	Wichita	1939	33,000	32,000	115,705
Castlebury	Wilbarger	....	190,127	‡	‡316,793
Chalk Hill	Archer	....	196,843	‡	‡3,213,589
Clay County, Unclassified	Clay		653,896	993,794	2,920,755
Clinging-Smith		1941		17,841	17,841
Consolidated	Wilbarger	....	2,205,809	295,797	58,070,901
Cooke County Unclassified	Cooke	....	400	1,640,913	1,641,313
Davenport	Montague		110,205	‡	‡1,903,468
Dundee	Archer	1939	33,017	‡	‡57,919
Electra	Wichita	1911	2,897,564	2,800,800	142,367,773
Electra: Ellenberger Lime	Wichita	1941		6,047	6,047
Fargo	Wilbarger	....	*5,900	*340,322	*346,222
Field-Bowers	Cooke	....	7,653	‡	‡651,010
Fluhman	Wilbarger	....	33,026	‡	‡861,630
Foard County Unclassified	Foard	....		†11,284	†11,284
Gainesville	Cooke	....	375,019	‡	‡3,247,998
Grayson County Unclassified	Grayson	....	7,762	21,280	53,930
Halsell	Clay	1939	53,705	132,499	197,338
Hapgood	Clay	1940	16,600	54,724	71,324
Harrold		1941		13,255	13,255
Hoefle		1941		3,724	3,724
Holt	Montague		120,163	‡	‡630,987
Hoosier	Cooke	....	210,149	‡	‡7,794,059
Hott	Montague		190,623	‡	‡637,224
Hull Silk	Archer	1938	2,741,017	3,822,592	7,022,297
Hults & Owens	Montague	1940	10,250	29,336	39,586
Ikard	Archer	....			3,000
Jack County Unclassified	Jack	....		†1,033,837	†1,033,837
Jacobs	Cooke			‡	‡147,731
James	Young	1940	80,900	226,759	307,659
Johnson	Foard	1932	144,893	116,170	1,612,866
K.M.A.	Wichita	1913	12,373,999	9,623,073	58,914,918
K.M.A. Ellenberger	Wichita			†589,624	†580,624
Kadane	Wichita			†83,460	†83,460
Kerlyn Loving		1941		11,472	11,472
Kinder	Clay	1939	3,625	3,046	7,508
King	Wilbarger	....	*33,300	*21,459	*54,759
Knight	Young	....	120,730	264,952	385,682
Knox	Young	....	68,350	175,932	244,282
Lawson-Bugg	Cooke				14,000
Loving-Deep	Young	1939	950	‡	‡4,289
Lupton & McLester		1941		71,488	71,488
McCrory	Archer	1938	7,595	‡	‡23,240
Mankins	Archer	1939	115,000	179,181	306,262
Meadors	Cooke	....	7,816	‡	‡29,994
Montague County Unclassified	Montague			1,580,961	1,580,961
Muenster	Cooke		44,400	‡	‡1,627,562
New York City		1941		11,720	11,720
Nocona	Montague	1925	1,225,104	‡	‡28,623,834
North Jermyn	Jack	1939	8,075	‡	‡13,048
North Muenster[2]	Cooke		850,976	‡	‡4,480,485
Petrolia	Clay	1902	107,496	‡	‡6,587,267
Pendham	Baylor	1940	7,350	49,180	56,530
Ringgold	Montague	1940	62,200	132,285	194,485
Rodgers & Rodgers	Montague	1939	670,692	459,958	1,212,841
Ross	Clay	1939	21,103	48,561	70,594
Scotland	Archer		3,504	51,309	59,993
Sewell	Young	1940	236,500	333,278	569,778
Seymour	Baylor	1939	176,879	326,631	534,266
Sigler	Wilbarger	1920			348,000
South Scotland	Archer	1939	390	**	1,027
South Vernon	Wilbarger	1937	206,988	‡	‡9,713,828

8 METALS THAT LICK 1000 CORROSIVE JOBS



One or more of the INCO family of metals are currently being used for:

WATERS, such as—distilled, fresh, brackish, sea and effluent.

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ACID SALTS, such as—zinc chloride, ammonium sulfate, magnesium chloride, aluminum sulfate, and ammonium chloride.

OXIDIZING ACID SALTS, such as—silver nitrate solution, chromates, permanganates, nitrates.

MINERAL ACIDS, such as—sulfuric, hydrochloric, hydrofluoric, and pure phosphoric.

ORGANIC ACIDS, such as—stearic, oleic, linoleic, citric, tartaric and malic.

ALKALIES, such as—caustic soda, caustic potash, soda ash, and anhydrous ammonia.

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You doubtless know that Monel, Nickel and Inconel have for years been successfully employed against a wide variety of corrosives. But do you know that *newer* members developed in recent years have vastly increased the usefulness of this family of metals?

By selecting the right INCO Nickel Alloy you can now get the desired combination of chemical and mechanical properties for almost any type of corrosive job. Furthermore, other important properties offered by these new alloys meet a wide range of fabrication and physical requirements other than corrosion.

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All of these corrosion-resistant metals possess outstanding qualities of strength, toughness, wear resistance, and fabrication. In addition, individual alloys are characterized by anti-galling and anti-sparking properties, resistance to elevated temperatures, amenability to heat treatment, exceptional resilience, and magnetic properties ranging from definitely magnetic to non-magnetic.

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Sheet . . . Strip . . . Rod . . . Tubing . . . Wire . . . Castings

North Texas—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Swenson	Stonewall	....	20,250	‡	‡60,369
Thalia	Foard	1926	12,919	‡	‡323,913
Throckmorton Co. Unclassified	Throckmorton	....	.....	.....	21,000
Trubenbach	Cooke	....	13,250	‡	‡137,714
Vogtsberger	Archer	1940	13,150	28,331	41,481
Voth	Cooke	1939	140,868	135,291	422,221
Walnut Bend (Bext)	Cooke	1938	1,272,146	1,090,703	2,633,821
Wheelock	Cooke	....	4,600	‡	‡70,918
Wichita County Unclassified	Wichita	....	.....	165,482	165,482
Wichita Falls	Wichita	....	15,190	15,000	58,022
Wilbarger County Unclassified	Wilbarger	1912	31,725	2,581,307	3,761,599
Wilson	Archer	1940	1,870	5,817	7,687
Worsham	Clay	1923	.....	.....	204,000
Young County Unclassified	Young	....	2,218,013	2,730,111	38,103,044
Zenith	Wilbarger	....	3,250	‡	‡355,200
Total North Texas	.....	....	38,055,162	39,477,769	698,059,491

[1] Formerly included with Bonita.
[2] Includes Danglemeyer and Haveramp.
† Data available for 1941 only.
* Data available for 1940 and 1941 only.
** No data available for 1941.
‡ Production for 1941 included with "Unclassified" fields of county.

Texas Panhandle

Carson County:					
Burnett	Carson	1921	196,527	*	*5,415,914
Cooper-Moore	Carson	1927	2,165,247	*	*14,525,636
Empire-Fields (Including Dauer)	Carson	1930	25,552	*	*374,280
Rozana-Nosl	Carson	1926	735,992	*	*15,046,147
Unclassified	Carson	....	.....	3,706,506	3,706,506
Total Carson County	.....	....	3,123,318	3,706,506	*39,068,483
Gray County:					
Bell	Gray	1935	11,300	*	*80,837
Bowers	Gray	1926	654,016	*	*27,965,379
Chapman	Gray	1926	467,024	*	*6,304,107
Finley	Gray	1927	2,560,103	*	*50,254,649
Lefors	Gray	1927	1,150,816	*	*20,484,497
Morse	Gray	1927	779,625	*	*8,328,453
South Pampa	Gray	1925	1,099,043	*	*16,465,159
Taylor	Gray	1935	1,995	*	*19,144
Warner	Gray	1935	10,525	*	*51,851
West Pampa	Gray	1926	5,750,500	*	*43,508,390
Unclassified	Gray	....	.....	12,495,710	12,495,710
Total Gray County	.....	....	12,484,947	12,495,710	*185,958,176
Hutchinson County:					
Armstrong[1]	Hutchinson	1928	137,026	*	*334,569
Badger	Hutchinson	1926	4,771,917	*	*22,699,708
Borger & Pantex	Hutchinson	1925	1,240,865	*	*89,898,693
Cockrell	Hutchinson	1926	28,028	*	*5,658,661
Dial	Hutchinson	1922	2,750,543	*	*24,274,756
Sanford	Hutchinson	1926	133,427	*	*4,121,505
Unclassified	Hutchinson	....	.....	9,813,085	9,813,085
Total Hutchinson County	.....	....	9,061,806	9,813,085	*156,800,977
Moore County:					
Armstrong	Moore	1928	19,807	*	*1,170,945
Morton	Moore	1930	240,069	*	*3,837,621
Unclassified	Moore	....	.....	161,832	161,832
Total Moore County	.....	....	259,876	161,832	*5,170,398
Osborne Area:					
Unclassified	.....	....	.....	181,949	181,949
Total Osborne Area	.....	....	.....	181,949	181,949
Potter County:					
Warwick	Potter	1925	.....	.....	42,000
Total Potter County	.....	....	.....	.....	42,000
Wheeler County:					
Bentley & E. Shamrock	Wheeler	1925	1,866,025	*	*20,782,158
Twitty	Wheeler	1939	8,375	*	*13,791
Unclassified	Wheeler	....	.....	1,431,307	1,431,307
Total Wheeler County	.....	....	1,874,400	1,431,307	*22,227,256
Total Texas Panhandle	.....	....	26,804,347	27,790,389	409,449,239

* Production for 1941 included with "Unclassified" fields of county.
[1] Includes Pringle production, 12,154 bbls. cumulative to Jan. 1, 1940.

Texas Gulf Coast

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Abel Borden (Mackey)	Wharton	1940	15,200	23,554	38,754
Ace: Deep (Schwab-Wilcox)	Polk	1934	123,600	73,818	264,744
Ace: Shallow (Schwab)	Polk	1934	10,000	2,283	150,238
Aldine	Harris	1939	15,105	13,020	44,417
Allen	Brazoria	1927	300	.....	90,832
Alta Loma	Galveston	1940	380,654	62,263	442,917
Amelia	Jefferson	1936	893,000	1,221,996	5,722,930
Anahuac	Chambers	1935	2,683,000	4,651,926	20,107,926
Angleton	Brazoria	1939	234,090	230,372	481,665
Ariola	Hardin	1932	128,964	165,494	2,217,632
Armour (McCloskey)	Matagorda	1938	26,900	29,584	149,360
Bailey's Prairie	Brazoria	1940	200	.....	200
Bammell	Harris	1937	295,859	43,094	483,835
Barbers Hill	Chambers	1916	3,180,000	3,052,950	74,455,448
Batson (Deep)	Hardin	1903	235,640	154,187	2,174,109
Batson (Shallow)	Hardin	1903	214,800	179,727	39,004,803
Big Creek	Fort Bend	1922	131,520	143,532	9,959,807
Big Hill	Jefferson	1923	.....	.....	14,000
Big Hill	Matagorda	1904	.....	.....	211,000
Bland	Orange	1941	.....	.....	8,697
Blessing	Matagorda	1940	1,450	8,697	*1,450
Blue Ridge	Fort Bend	1919	281,231	*	11,064,921
Boling	Wharton	1925	449,890	344,003	7,528,637
Brenham	Washington	1915	10,000	377,695	381,739
Brookshire (San Felipe)	Waller	1934	516	4,030	22,333
Buckeye	Matagorda	1932	54,611	864	807,774
Buttermilk Slough	Matagorda	1939	4,104	30,170	9,363
Call	Newton	1937	.....	2,231	11,500
Caplen	Galveston	1939	111,439	.....	320,058
Cedar Bayou	Chambers	1938	9,850	164,300	14,724
Cedar Point	Chambers	1938	418,961	4,194	1,067,158
Cheek, North	Jefferson	1937	1,120	263,420	*72,762
Chenango	Brazoria	1941	.....	*	36,136
Chocolate Bayou	Brazoria	1939	41,989	36,136	165,025
Chriesman	Burleson	1938	3,549	120,831	13,909
Clam Lake (McFaddin)	Jefferson	1937	86,492	360	310,819
Clay Creek	Washington	1928	133,413	124,757	4,456,737
Clear Lake	Harris	1938	375,602	153,010	1,130,600
Cleveland	Liberty	1933	75,964	574,899	6,932,201
Clinton (Green's Bayou)	Harris	1937	45,899	85,761	1,328,782
Clodine	Fort Bend	1941	.....	45,404	274,265
Conroe	Montgomery	1931	9,303,000	36,708	36,796
Conroe, West	Montgomery	1941	.....	11,617,700	129,149,700
Cordele	Jackson	1938	747,619	6,897	6,897
Cotton Lake	Chambers	1936	102,000	488,111	2,038,401
Cotton Lake, South	Chambers	1936	618,902	80,927	765,915
				654,747	2,227,079
Damon Mound	Brazoria	1915	98,650	88,748	7,116,824
Danbury	Brazoria	1934	107,500	158,572	545,946
Dickinson	Galveston	1934	789,650	607,903	6,932,201
Dyersdale	Harris	1940	43,094	306,536	349,630
East Bernard	Wharton	1940	600	*	*600
Edna	Jackson	1937	602	*	*4,685
Esperson	Liberty	1929	425,089	598,792	6,555,346
Esperson Dome, South	Liberty	1939	373,060	340,758	855,861
Eureka Heights	Harris	1935	923,042	591,894	2,855,795
Eureka Height, Deep	Harris	1935	6,000	3,918	40,901
Fairbanks	Harris	1938	2,460,000	2,813,841	8,780,541
Fannett	Jefferson	1927	181,934	438,735	3,043,430
Fig Ridge	Chambers	1940	10,000	35,767	45,767
Fisher's Reef	Chambers	1940	1,500	28,979	30,479
Francitas	Jackson	1938	89,000	102,918	268,049
Friendswood (Webster)	Harris	1937	2,542,000	2,964,529	8,995,529
Ganado	Jackson	1935	75,000	78,585	188,795
Ganado, Deep	Jackson	1941	.....	57,771	57,771
Garwood, West	Colorado	1933	500	43,899	50,099
Gillock	Galveston	1934	1,405,400	1,771,057	6,536,957
Goose Creek	Harris	1908	571,000	507,162	72,362,584
Green Lake	Galveston	1936	16,000	32,671	87,065
Hamman (Bay City)	Matagorda	1936	836,000	604,175	3,092,435
Hankamer	Liberty	1929	200,000	179,433	5,542,616
Hankamer, New	Liberty	1929	65,490	64,774	678,740
Hardin	Liberty	1935	1,646,000	1,614,607	7,491,389
Hastings	Brazoria	1934	5,421,000	7,627,467	35,274,467
Hawkinsville	Matagorda	1936	.....	.....	2,000
High Island	Galveston	1922	966,000	1,000,603	17,841,552
Hillje	Wharton	1939	75,500	232,037	310,276
Hitchcock	Galveston	1937	203,000	151,527	872,116
Hockley	Harris	1923	.....	.....	23,065
Hoskins Mound	Brazoria	1905	.....	.....	32,000
Hull (Deep)	Liberty	1918	1,241,000	2,395,515	93,927,424
Hull (Shallow)	Liberty	1918	763,490		
Humble (Deep)	Harris	1904	260,000	919,967	126,763,645
Humble (Shallow)	Harris	1904	695,000		
Joe's Lake (Spurger)	Tyler	1937	852,885	916,841	2,536,765
Joyce Richardson (Ogburn)	Harris	1940	15,000	31,723	46,723
Katy	Waller	1938	75,000	*	*155,464
Kittrell	Houston	1934	119,342	*	*1,594,366
Kubela	Wharton	1935	278,000	268,361	1,132,743
La Belle	Jefferson	1937	57,000	62,045	493,426

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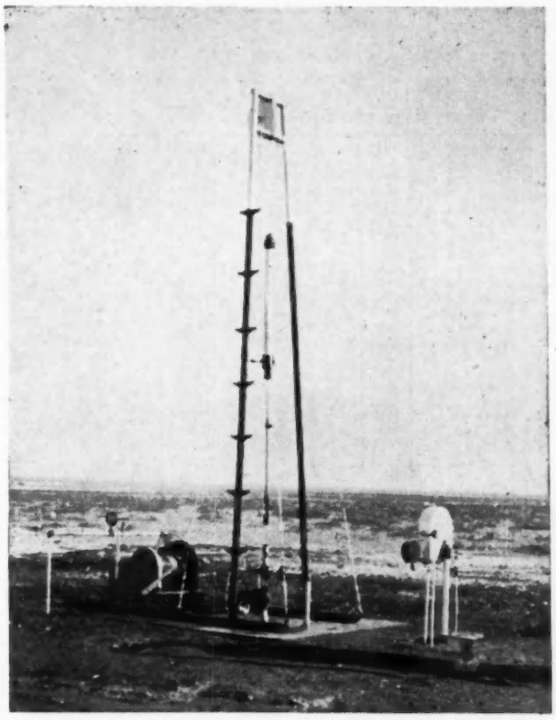
NIXON
SURFACE CONTROL GAS-LIFT SYSTEM



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Texas Gulf Coast—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Lake Creek	Montgomery	1941	.....	44,595	44,595
League City	Galveston	1938	715,192	621,275	1,723,367
Lissie	Wharton	1940	500	*	*500
Livingston	Polk	1932	620,500	577,162	6,780,347
Lochridge	Brazoria	1937	800,143	727,717	3,229,771
Lolita	Jackson	1940	217,963	1,421,774	1,639,737
Lost Lake	Chambers	1929	30,115	24,755	1,014,677
Louise	Wharton	1933	342,224	424,103	3,425,668
Lovell's Lake	Jefferson	1938	882,000	1,326,170	2,504,170
Lucky	Matagorda	1941	.....	14,338	14,338
Magnet	Wharton	1936	515,000	776,454	2,122,455
Magnolia	Montgomery	1941	.....	4,504	4,504
Manvel	Brazoria	1931	2,627,000	1,914,031	21,261,338
Markham	Matagorda	1908	341,349	267,792	8,381,618
Martha	Liberty	1939	84,563	152,784	264,646
Mayrits	Jackson	1935	193,000	104,731	506,720
Moss Bluff	Liberty	1930	.....	.....	210,265
Mykawa	Harris	1929	65,000	42,375	929,159
Mykawa, New	Harris	1929	258,630	210,896	3,507,253
Nash	Fort Bend	1926	.....	.....	1,724,859
Nome	Jefferson	1936	315,000	558,412	2,397,026
North Dayton	Liberty	1905	10,000	6,942	2,169,175
North Houston	Harris	1938	89,243	54,302	189,253
North Markham	Matagorda	1938	35,982	184,692	265,367
Old Ocean	Brazoria	1934	4,165,000	4,837,036	14,703,036
Orange	Orange	1913	889,000	150,636	31,956,277
Orchard	Fort Bend	1926	150,862	52,185	3,853,531
Oyster Bayou	Chambers	1941	.....	38,603	38,603
Palacios	Matagorda	1937	11,300	4,261	131,227
Pickett Ridge	Wharton	1935	348,250	511,147	2,878,028
Pierce Junction	Harris	1921	628,000	634,374	34,020,530
Pledger	Brazoria	1932	.....	.....	17,000
Port Neches	Orange	1929	330,890	153,137	5,732,691
Port Neches, West	Orange	1941	.....	255,573	255,573
Raccoon Bend (Deep)	Austin	1934	788,000	928,863	5,969,666
Raccoon Bend (Shallow)	Austin	1927	444,000	405,903	17,873,623
Red Fish Reef	Chambers	1940	6,950	140,397	147,347
Rockland	Jasper	1928	3,650	2,647	42,475
Rosenberg	Fort Bend	1939	9,450	*	*15,492
Rosslyn	Harris	1938	9,750	5,795	42,353
Rowan	Brazoria	1940	45,230	145,397	190,627
Sabine Pass	Jefferson	1941	.....	11,142	11,142
Sandy Point	Brazoria	1937	29,600	33,251	277,257
Saratoga	Hardin	1902	311,950	290,157	29,762,865
Satsuma	Harris	1936	118,353	▼88,722	588,355
Seabreeze	Chambers	1935	129,275	119,328	475,650
Segno (Deep)	Polk	1931	1,102,000	1,204,219	2,802,299
Segno (Shallow)	Polk	1931	504,000	324,138	2,465,998
Shepherd	San Jacinto	1940	2,330	*	*2,330
Sheppards Mott	Matagorda	1936	.....	.....	1,000
Sheridan	Colorado	1940	30,893	48,306	79,199
Silsbee	Hardin	1936	373,350	700,244	2,679,087
Silsbee, West	Hardin	1941	.....	23,627	23,627
Sour Lake	Hardin	1901	399,850	383,564	79,412,001
South China	Jefferson	1939	107,520	175,592	299,938
South Houston	Harris	1935	628,500	788,403	6,768,502
South Liberty	Liberty	1925	182,916	150,523	15,297,128
Spindletop	Jefferson	1901	609,000	487,316	125,891,784
Splendora	Montgomery	1934	.....	.....	1,000
Stratton Ridge	Brazoria	1922	.....	30,374	60,748
Sugarland	Fort Bend	1928	1,354,000	646,215	30,629,215
Texana	Jackson	1939	5,400	8,099	15,207
Thompson (Deep)	Fort Bend	1931	2,700,000	2,628,273	38,722,273
Thompson, South (4300' Miocene)	Fort Bend	1939	200,000	1,187,648	2,204,748
(5400' Sand)	Fort Bend	1939	676,000		
Thompson (Shallow)	Fort Bend	1931	163,000	271,353	1,212,753
Thompson (Vicksburg)	Fort Bend	1939	575,000	501,165	1,271,415
Tomball	Harris	1933	2,675,000	3,282,350	20,015,350
Turtle Bay	Chambers	1935	254,000	487,721	1,975,432
Turtle Bay (Lots Sand)	Chambers	1935	8,550	*	*22,964
Vanderbilt	Jackson	1934	9,650	*	*182,873
Van Vleck	Matagorda	1934	1,151,817	780,733	4,656,763
West Beaumont	Jefferson	1936	1,149,000	819,488	3,933,488
West Columbia	Brazoria	1919	2,353,000	2,770,803	82,528,128
West Ganado	Jackson	1940	3,638	76,060	79,698
West Orange	Orange	1937	715,430	711,775	2,427,395
West Ranch	Jackson	1938	2,077,000	3,650,836	6,026,836
Willow Slough	Chambers	1937	110,250	81,754	448,999
Wilson Creek	Matagorda	1932	25,000	11,998	96,112
Withers	Wharton	1936	1,712,000	2,916,580	7,682,580
Total, Texas Gulf Coast		....	83,756,769	95,928,483	1,395,983,887

* No data available on production in 1941.
† No data available on small production at Chriesman in 1938 and 1939.

South Texas—Corpus Christi District

Agua Dulce[1]	Nueces	1930	128,137	514,935	1,325,576
Alfred	Jim Wells	1938	57,500	164,428	262,587
Alice	Jim Wells	1938	645,241	504,834	2,559,339
Angelita	San Patricio	1934	789	‡	29,112
Aransas Pass (McCampbell)	San Patricio and Aransas	1936	2,994,142	1,954,795	10,895,158
Baffins Bay	Kleberg	1940	3,500	.....	3,500
Bandera	Jim Wells	1939	.....	.....	1,115
Beeville (Church)	Bee	....	.....	.....	1,000
Ben Bolt	Jim Wells	1939	735,000	775,418	1,637,280

South Texas—Corpus Christi District—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Bentonville (Captain Lucey)	Jim Wells	1932	42,535	44,214	492,293
Bird Island	Kleberg	1939	10,800	14,217	30,466
Blucher	Jim Wells	1939	750	.....	2,991
Bonnieview	Refugio	1939	.....	.....	4,580
Burnell	Karnes	1938	302	.....	1,118
Caesar (Ruhman)	Bee	1934	43,214	34,431	1,004,513
Camada	Jim Wells	1939	1,000	583	3,505
Chapman Ranch	Nueces	1937	.....	15,392	56,892
Clara Driscoll	Nueces	1935	134,643	163,808	1,149,031
Clark-Muile	Jim Wells	1939	22,658	2,949	45,480
Coleto Creek	Victoria	1934	117,243	215,452	1,341,938
Cologne	Victoria	1939	4,500	33,616	39,317
Coloma	.....	.....	.....	21,380	†21,380
Diamond Half	.....	1940	43,610	33,009	**76,619
Dinero (Lucas-North)	Live Oak	1935	4,000	648	81,773
Dirks	Bee	1934	524,108	426,437	5,957,691
Driscoll Ranch	Nueces	1939	2,000	9,515	29,515
Duck Bay	Calhoun	1940	7,000	.....	7,000
East Flour Bluff	Nueces	1940	33,750	217,724	251,474
East Placedo	Victoria	1938	142,453	‡	377,619
East Premont	Jim Wells	1938	128,215	40,504	284,695
East Telferner	Victoria	1938	300	.....	35,188
East White Point	San Patricio	1938	3,014,123	2,816,814	8,307,035
Fagan	Refugio	1940	22,000	123,294	143,294
Flour Bluff	Nueces	1936	1,115,350	1,091,114	6,995,731
Foley-Holsmark	Bee	1935	6,254	‡	39,221
Fort Merrill	Live Oak	1935	.....	.....	32,000
Gallagher	Jim Wells	1940	24,000	33,309	57,309
Genevieve	.....	1941	.....	1,249	1,249
Grayburg (Kimble)	Bee	1934	.....	.....	5,000
Greta	Refugio	1933	1,493,000	2,199,136	31,890,516
Greta (Deep)	Refugio	.....	†	130,452	†130,452
Henshaw	Jim Wells	1940	5,650	16,743	22,393
Heyser	Calhoun	1936	3,399,000	2,642,601	14,197,601
Holsmark	Bee	1939	1,429	8,783	10,812
Hordes Creek	Goliad	1935	6,752	8,264	62,047
Keeran	Victoria	1932	250,141	165,485	1,518,927
King	Nueces	1937	361,983	551,623	1,303,018
Kingsville	Kleberg	1926	16,215	15,182	756,641
La Blanca	Hidalgo	1937	144,028	‡	533,540
La Gloria	Jim Wells	1939	16,000	12,609	43,799
La Mar	Aransas	1937	95	.....	1,095
La Rosa	Refugio	1938	1,301,892	967,848	3,296,770
La Sal Vieja	Willacy	1936	.....	.....	15,000
Las Mestenas	Hidalgo	1937	49,543	‡	111,804
La Ward North	.....	1941	.....	12,054	12,054
London	Nueces	1937	11,924	14,027	86,203
Luby	Nueces	1937	1,459,000	1,327,651	6,916,651
Luby Deep	Nueces	1941	.....	12,673	12,673
Lucas (Mt. Lucas)	Live Oak	1935	17,583	16,422	318,524
McAllen (Pharr)	Hidalgo	1938	5,368	‡	8,143
McFadden	Refugio	1932	790,400	690,568	2,671,350
McNeill	Live Oak	1934	20,914	13,046	275,847
Magnolia City	Jim Wells	1939	95,764	33,377	146,644
Mathis East	Victoria	1940	5,000	5,956	10,956
Maurbro	.....	.....	.....	183,233	†183,233
Melon Creek	Refugio	1939	133,141	149,833	410,503
Mercedes (Capsillo)	Hidalgo	1935	6,823	‡	177,561
Midway	San Patricio	1937	350,649	627,166	1,547,810
Minnie Bock	Nueces	1939	403,883	594,650	1,113,310
Mission River	.....	.....	245,428	310,314	**555,742
Nichols (Weslaco)	Hidalgo	1938	.....	60,954	62,949
Normanna	Bee	1930	7,500	7,245	91,276
North Keeran	Victoria	1940	5,429	‡	5,429
North Luby	Nueces	1939	25,643	29,492	70,416
North McFadden	Victoria	1937	9,950	15,125	45,819
North Normanna	Bee	1938	.....	*	*766
North Pettus	Bee	1934	288,651	‡	3,681,110
Oakville	Live Oak	1937	218,210	247,203	584,130
O'Connor	Refugio	1931	23,197	39,398	575,617
Odem	Jim Wells	1940	2,150	38,036	40,186
Orange Grove	Jim Wells	1940	193,870	382,558	576,428
Pettus	Bee	1930	133,294	122,825	8,983,323
Pettus (New)	Bee	.....	230,041	206,390	**436,431
Placedo	Victoria	1935	1,882,000	1,287,072	13,173,072
Placedo Extension	.....	1937	.....	103,855	104,855
Plummer	Bee	1937	38,962	21,852	260,739
Plymouth	San Patricio	1935	2,145,000	2,297,908	22,721,908
Port Lavaca	Calhoun	1934	50	.....	420,856
Premont (Seeligson)	Jim Wells	1933	128,253	56,825	768,153
Premont Prospect	.....	1941	.....	1,856	1,856
Ray	Bee	1935	61,147	61,813	1,567,576
Refugio (North)	Refugio	1941	.....	25,467	25,467
Refugio (Deep)	Refugio	1920	1,750,963	1,104,817	17,715,258
Refugio (Shallow)	Refugio	1928	200,695	359,539	21,979,442
Refugio (Fax)	Refugio	1940	133,027	164,851	297,878
Reynolds	Jim Wells	1939	496,524	334,848	976,518
Riverside	Nueces	1939	26,129	26,747	88,398
Robstown	Nueces	1939	30,516	28,376	65,957
Rutledge	Bee	1935	.....	.....	21,000
Sandia	Jim Wells	1937	450	713	20,021
Sarco	Goliad	1938	500	533	2,234
Saxet Deep (Frio)	Nueces	1923	2,660,549	1,550,908	22,769,238
Saxet (Shallow)	Nueces	1923	2,683,972	2,495,637	28,048,184
Shelton Ranch	.....	1937	.....	.....	2,000
Saxet Heights	Nueces	1935	205,864	94,582	6,635,659
Shield	Nueces	1940	18,950	87,161	106,111
Sinton	San Patricio	1934	4,400	‡	68,300
Slick	Goliad	1931	1,753	939	75,812
South Alfred	Jim Wells	1939	55,769	‡	100,721
South Burnell	Karnes	1937	171,983	114,905	967,193
South Clara Driscoll	Nueces	1937	725,500	962,318	2,839,283
South Saxet (Baldwin)	Nueces	1935	84,750	79,575	833,759
Stratton	Nueces	1931	40,198	597,783	773,908
Strauch (McMurry)	Bee	1937	375	155	7,104

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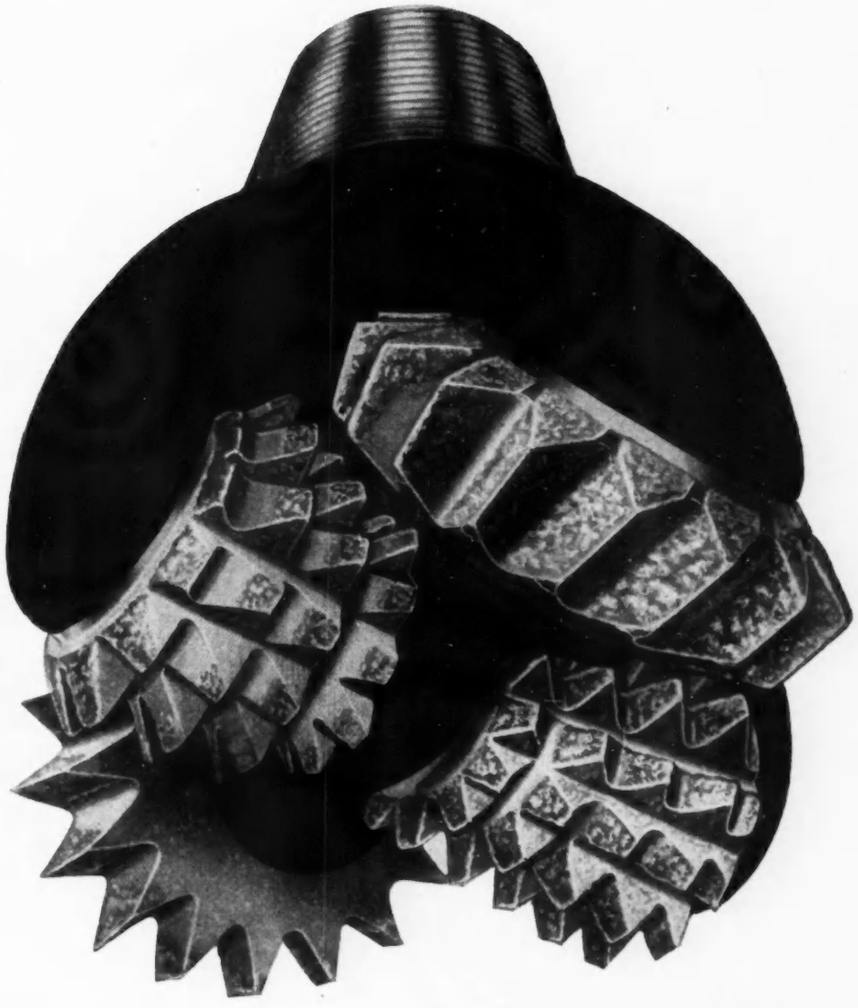

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South Texas—Corpus Christi District—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Sullivan (South Agua Dulce)	Nueces	....	7,640	2,947	**10,587
Taft	San Patricio	1935	915,892	600,967	4,995,989
Telferner	Victoria	1940	4,650	5,638	10,288
Terrell	Victoria	1940	1,725	7,212	8,937
Thomaston	De Witt	1940	2,500	5,280	7,780
Toland	Refugio	1939	2,900	‡	5,392
Tom Graham (E. Alice)	Jim Wells	1938	450,250	390,239	1,201,091
Tomoconnor	Refugio	1934	5,821,989	5,645,373	26,809,760
Tuleta, West	Bee	1934	63,249	42,320	1,913,215
Tulsita	Bee	1939	3,250	2,666	9,539
Victoria	Victoria	1940	103,450	110,849	214,299
Voss	Bee	1936	2,000	215	78,391
Wade City	Jim Wells	1939	687,490	1,104,678	1,792,971
Welder Jay		1941		†36,491	†36,491
Weser	Goliad	1936	750	19,254	21,004
West Saxet (Turkey Creek)	Nueces	1938	1,046,125	604,964	3,766,419
White Creek	Live Oak	1939	87,263	117,795	236,688
White Creek, South	Live Oak	1941		5,012	5,012
White Point	San Patricio	1930	8,000	12,041	148,212
Whittington	Live Oak	1935			3,000
Willamar	Willacy	1940	2,175	44,616	46,791
Woodsboro		1941		33,119	33,119
Total		....	44,498,234	41,765,702	311,879,518

[1] Includes North Agua Dulce.
* Data for 1940 only. ** Data for 1940 and 1941 production only.
† Data for 1941 only. ‡ No data for 1941.

South Texas—Laredo District

Adami	Webb	1939	231,562	143,088	387,301
Agua Prieta		1941		4,058	4,058
Albercas	Webb	1928	16,764	13,921	2,533,591
Alta Mesa	Brooks	1926	266,982	269,810	1,009,938
Alta Verde	Brooks	1938	325	250	6,740
Alworth	Jim Hogg	1929		†	27,000
Aviator	Webb	1922	105,793	97,889	6,103,329
Barbacoas	Starr	1934	2,250	744	34,765
Blanchard (Muralla)	Duval	1939	18,803	12,797	37,434
Boyle	Starr	1940	27,500	71,484	98,984
Bridwell	Duval	1940	13,500	60,189	73,689
Bruni	Webb	1938	95,925	54,801	2,742,568
Calliham	McMullen	1924	55,550	55,100	891,244
Carolina-Texas	Webb	1926	5,004	132	260,540
Casa Blanco	Duval	1938	112,659	115,919	465,612
Casa Blanco (West)	Duval	1941		43,944	43,944
Cedro Hill	Duval	1939	187,756	273,991	512,047
Charamouseo	Duval	1937	143,039	108,759	582,134
Charamouseo (South)	Duval	1941		65,860	65,860
Charco Redondo	Zapata	1926	6,250	5,566	162,223
Chiltipin	Duval	1939	13,987	14,915	33,446
Cole	Webb	1924	1,100	1,845	5,709
Cole (East)	Webb	1941		2,131	2,131
Cole (West)	Webb	1924	212,159	207,633	4,633,982
Colmena	Duval	1934	65,703	79,217	469,555
Colorado	Jim Hogg	1936	779,806	941,960	1,928,033
Comitas	Zapata	1934	233,346	173,660	1,532,771
Cuellar	Zapata	1928	29,478	20,823	2,619,763
Cuevitas (Guerra)	Starr	1933	163,247	93,630	1,221,337
Driscoll	Duval	1929	874,869	870,066	3,864,194
Eagle Hill	Jim Hogg	1933	205,147	269,514	1,469,465
East Benavides	Duval	1941		8,761	8,761
East Fitzsimmons	Duval	1940	500	*	500
Escobas-Jennings	Zapata	1930	801,107	691,844	9,893,396
Exell	McMullen	1937	444,643	290,890	2,473,840
Fitzsimmons	Duval	1938	736,896	556,617	2,394,436
Gandy		1941		79,007	79,007
Glenn	Webb	1940	102,467	401,931	504,398
Government Wells	Duval	1928	3,386,027	2,067,321	46,612,689
Haldeman		1941		7,136	7,136
Henne-Winch-Farris	Jim Hogg	1926	2,075	1,917	3,213,844
Hoffman	Duval	1935	1,921,063	2,022,770	7,509,354
Holbein	Jim Hogg	1940	1,525	34,999	36,524
Holland-Hebbronville	Jim Hogg	1940	1,405	*	1,405
Jacob	McMullen	1932	125,023	115,257	1,563,441
Kelsey	Jim Hogg	1938	637,927	767,629	1,751,355
Killam	Webb	1937	122,124	157,457	926,803
Killam, North	Webb	1941		11,347	11,347
Kohler	Duval	1926	17,500	15,422	608,476
Kohler, Deep	Duval	1936	6,593	7,248	54,766
Kreis		1941		20,702	20,702
Labbe	Duval	1937	66,017	74,417	380,869
La Reforma	Starr	1938	560	2,567	10,874
Las Animas	Jim Hogg	1938	9,000	3,151	42,095
Laurel	Webb	1932	4,175	4,078	622,445
Loma Alta	McMullen	1935	14,414	17,064	145,926
Loma Novio	Duval	1934	2,827,897	2,208,740	25,100,843
Loma Vista	Duval	1936	1,000	60	16,292
Longhorn	Duval	1938	664,013	442,926	1,548,252
Lopes	Webb	1935	1,641,865	1,426,519	11,510,889
Los Olmos	Starr	1931	21,500	20,341	630,761
Lundell	Duval	1937	270,231	429,670	1,094,093
Manila	Jim Hogg	1940	42,575	115,345	157,920
Mirando City	Webb	1926	110,100	106,750	9,205,360
Mirando Valley	Zapata	1926	295,143	153,917	1,389,622
Moca	Webb	1933	78,769	84,050	1,127,369
Munson	McMullen	1938	44,125	33,288	164,515
North Casa Blanca	Duval	1939	34,096	34,022	89,083
North Rincon	Starr	1939	9,143	79,246	100,041

South Texas—Laredo District—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
North Sweden (Benavides)	Duval	1937	1,931,025	1,536,548	10,721,813
O'Hern	Webb	1936	1,338,103	952,441	9,897,010
Oilton	Webb	1937	232,000	153,829	1,555,205
Palangana	Duval	1938			4,000
Peters	Duval	1933	39,526	32,808	221,279
Peters, East	Duval	1940	10,085	9,484	19,569
Petronilla		1941		9,167	9,167
Piedra de Lumbre	Duval	1935	625,879	731,900	2,675,154
Piedras Pintas	Duval	1925			147,215
Rancho Solo	Duval	1937	138,266	42,420	350,697
Rancho Solo Extension	Duval	1941		44,041	44,041
Randado	Jim Hogg	1925	92,017	81,172	4,819,040
Ricaby	Starr	1937	56,247	38,055	112,676
Rincon	Starr	1938	879,105	948,854	1,841,395
Rio Grande City	Starr	1932	23,500	42,655	411,634
Roma	Starr	1929	1,425	898	18,065
S. R. C.	Duval	1930		*	203,000
St. Charles		1941		19,199	19,199
Sam Fordyce	Hidalgo	1934	521,423	250,091	7,465,796
Sam Foryce, North	Hidalgo	1941		18,320	18,320
Sarnosa	Duval	1932	155,864	159,161	2,550,272
Seelig		1941		157,520	157,520
Sejita	Duval	1940	1,600		1,600
Seven Sisters	Duval	1935	2,483,127	2,659,537	16,176,534
Seven Sisters, South	Duval	1941		76,027	76,027
Southland	Duval	1939	50,503	32,375	102,083
South Ricaby (El Tanques)	Starr	1937	78,236	54,823	410,259
Sullivan City	Hidalgo	1939	65,391	247,739	**313,130
Sun	Starr	1938	280,026	421,559	856,635
Sweden	Duval	1937	23,675	17,514	229,308
Tarancuas	Duval	1940	118,500	182,605	301,105
Tesoro (De Soto)	Duval	1938	44,500	29,763	202,717
Thomas Lockhart	Duval	1937			12,083
Volpe	Webb	1939	155,413	176,431	347,288
Washburn Ranch	La Salle	1940	3,350	10,405	13,755
Yturria		1941		2,507	2,507
Yzanguierre	Starr	1940	285	2,432	2,717
Zim		1941		238	238
Total Laredo District		....	27,659,373	25,710,620	227,142,869

* No data for 1941.
** Data for 1940 and 1941 production only.

South Texas—San Antonio District

Alta Vista[1]	Bexar	[2]1930	6,000	2,439	55,052
Bateman (N. Dale)	Bastrop	1933	27,766	15,221	617,655
Batesville	Zavalla	1937			12,000
Bee Creek	Caldwell	1940	47,050	111,055	158,105
Beyersville	Williamson	1934	27,216	*	*538,779
Bob Rose		1940	2,764	3,762	6,526
Branyon[5]	Caldwell	1928	347,500	12,031	2,482,925
Buchanan	Caldwell	1929	35,227	26,311	427,779
Burdette Wells	Caldwell	1937	3,650	1,368	41,146
Campana		1940	311	201	512
Campana, South		1941		2,874	2,874
Carroll	Bastrop	1933	5,004	11	99,677
Carrizo				5,395	†5,395
Carver-Kallison[6]	Guadalupe	1937	350	633	46,643
Cedar Creek	Bastrop	1933	16,500	11,554	278,419
Chapman-Abbot	Williamson	1930	67,751	66,182	4,534,431
Chicon Lake	Medina	1934	14,923	16,097	71,568
Cooksey	Bexar	1930			61,000
Clark		1940	29,074	14,064	43,138
Dale	Caldwell	1927	76,750	48,092	1,490,706
Dale, West	Caldwell	1940	17,995	14,889	32,884
Darst Creek[3]	Guadalupe	1929	2,167,224	1,789,147	52,428,476
Day	Guadalupe	1940	575	2,114	2,689
Dunlap	Caldwell	1931	19,700	15,085	355,375
Dunlay	Medina	1938			985
Dupree			1,949	1,425	3,374
Eckert	Bexar	1928	34,765	29,802	950,743
Elgin		1941		3,606	3,606
Espanda Mission		1940	151	47	198
Fairfield (La Coste)	Bexar	1938	960	1,040	4,003
Gas Ridge	Bexar	1937	3,175	12,574	23,047
Hilbig	Bastrop	1933	70,150	81,345	1,609,771
Jones			686	596	1,282
Larremore	Caldwell	1928	17,775	17,344	326,594
Lavernia (Elm Creek)	Guadalupe	1939	6,319	18,458	25,785
Lentz		1941		5,230	5,230
Lone Oak	Bexar	1935			2,000
Luling	Caldwell-Guadalupe	1923	2,351,261	2,238,066	77,213,192
Lytton Springs	Caldwell	1925	105,123	98,803	7,960,571
Manda (Kimbro)	Travis	1934		1,605	17,605
Manford		1941		6,658	6,658
Matthews		1940	6,800	5,533	12,333
Minerva-Rockdale	Milam	1922	75,675	76,718	3,655,731
Mission		1940	962	302	1,264
Noack		1940	20,063	17,226	37,289
Ottine	Gonzales	1929			12,000
Pearsall	Frio	1935	212,983	302,569	1,494,639
Philtop		1940	2,600	1,203	3,803
Riddle	Bastrop	1938	16,974	14,193	75,209
Salt Flat	Caldwell	1928	1,540,213	1,263,196	42,700,909
Salt Flat, North	Caldwell	1941		4,919	4,919
Schattel	Frio	1938			633

South Texas—San Antonio District—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Schimmel-Batts	Bastrop	1935	.....	.....	7,000
Somerset	Atascosa-Bexar	1919	198,175	181,297	11,508,602
Southton		1941	.....	17,172	17,172
Spiller	Guadalupe	1940	400	4,522	4,922
Staples	Guadalupe	1935	.....	.....	1,000
Tanglewood	Burleson	1938	3,829	*	*14,794
Taylor-Ina[7]	Medina	1935	3,204	2,770	158,891
Thrall	Williamson	1915	29,723	22,038	2,475,916
Tinny Creek	Caldwell	1940	870	89,235	90,105
Von Ormy	Bexar	1935	36,963	31,669	249,392
Walnut Creek	Caldwell	1938	.....	1,586	4,482
Yancy		1940	87	284	371
Yost	Bastrop	1928	12,850	7,436	931,678
Yturri-Southton	Bexar	1929	18,100	*	*634,175
Zoborowski	Guadalupe	1931	21,113	19,246	220,968
Total San Antonio District	.....	....	7,707,228	6,738,238	216,266,595

[1] Includes Coffey Field.
[2] Includes production of previous years, back to about 1912.
[3] Includes Darst Creek extension and Manford.
[5] Includes Ellison-Young.
[6] Formerly Nash Creek.
[7] Formerly Medina County.
* No data available on 1941 production.
† Data available only for 1941.

West Texas

Abell	Pecos	1940	5,640	163,839	169,479
Abell Permian	Pecos	1941	.....	7,155	7,155
Addis-Odessa South Cowden	Ector	1933	305,542	954,328	2,194,707
Anthony (Toyah)	Reeves	1939	.....	557	2,216
Apco (Masterson Deep)	Pecos	1939	44,450	90,391	155,392
Barnhart		1941	.....	14,095	14,095
Bean		1941	.....	4,718	4,718
Bert Fields	Winkler	1936	100,550	**	407,711
Big Lake (Deep)	Reagan	1928	604,026‡		
Big Lake (Shallow)	Reagan	1923	1,534,987‡	2,017,492	98,752,739
Bolt		1940	562	612	1,174
Carter	Glasscock	1937	6,826	5,192	29,142
Cedar Lake	Gaines	1939	47,267	193,630	243,572
Chalk[1]	Howard-Glasscock	1926	4,956,029	4,763,015	99,285,111
Church & Fields	Crane	1926	1,099,014	258,071	66,448,434
Clara Couch		1941	.....	692	692
Crockett[2]	Crockett	1938	98,126	77,907	268,414
Dean	Cochran	1938	11,764	13,048	52,747
Deep Rock	Andrews	1933	565,863	515,029	3,712,168
Douro			.....	198	*198
Duggan	Cochran	1937	207,009	.....	522,051
Dune (North Church)	Crane	1938	130,126	168,826	458,337
Eaves	Winkler	1936	123,865	157,524	557,778
Edwards			2,082	2,638	§4,720
Ella Waddell	Crane	1940	3,805	17,329	21,134
Emma	Ector	1937	245,992	351,229	947,996
Emperor	Winkler		405,666	420,853	§826,519
Emperor (Deep)	Winkler	1940	114,392	167,600	§281,992
Foster[7]	Ector	1936	3,775,659	4,884,494	14,430,648
Fromme	Pecos	1940	27,661	35,184	§62,845
Funk	Tom Green	1940	390	.....	390
Garza (Emerald)	Garza	....	*	*11,646	*11,646
Goldsmith-Cummings	Ector	1935	8,018,027	8,173,773	32,799,298
Goldsmith (North)	Ector	1940	17,050	49,766	66,816
Grassroots	Pecos	1940	75	800	875
Gulf-McElroy	Crane	1926	3,965,436	4,378,213	55,487,567
Gulf-Waddell	Crane	1934	612,823	515,143	3,715,680
Harper	Ector	1933	1,260,542	1,039,181	7,371,796
Heiner		1941	.....	3,810	3,810
Henderson	Winkler	1936	980,988	877,117	5,314,569
Hendricks	Winkler	1926	2,950,753	2,847,319	201,781,917
Herrington	Upton	1938	12,116	9,170	75,910
Holt	Andrews	1938	4,000	**	15,271
Hoover		1941	.....	3,079	3,079
Iatan-East Howard	Howard-Mitchell	1936	1,713,256	1,459,319	14,920,536
Irion		1941	.....	4,140	4,140
Jamison & Pollard		1941	.....	21,131	21,131
Jordan	Crane	1937	1,284,556	1,490,662	4,445,515
Judkins (Penwell)	Ector	1926	1,174,247	1,465,183	22,477,992
Justiceburg	Garza	1937	450	9	916,438
Kermit[3]	Winkler	1934	3,237,592	2,885,758	28,321,459
Keystone (Colby)	Winkler	1935	1,670,117	1,163,596	6,877,381
Keystone Lime	Winkler	1941	.....	558,629	558,629
Leck	Winkler	1934	162,437	195,848	3,744,998
Lehn			132,972	137,975	§270,947
Live Oak		1941	.....	1,627	1,627
Lubbock		1941	.....	2,731	2,731
McCamey[4]	Crane-Upton	1926	4,382,818	3,795,495	56,687,920
McClintic	Crane-Upton		360,398	51,323	§411,721
McKnight	Crane	1935	20,760	**	49,868
McMillan			18,430	4,581	§23,011
Mason	Loving	1937	84,026	66,242	440,960
Masterson (Shallow)	Pecos	1929	395,653	59,704	1,778,437
Means	Andrews	1934	838,126	1,297,744	5,354,093
Mertson	Irion	1930	5,702	**	135,259
Moore	Howard	1937	15,923	15,214	77,724
Moss	Ector	1938	.....	.....	1,861
Netterville	Pecos	1935	38,974	32,176	357,397
Noelke	Crockett	1940	9,425	98,208	107,633

West Texas—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
North Cowden (Shallow)	Ector	1930	3,605,974	4,866,307	20,856,509
North Cowden (Deep)	Ector	1930	35,242	41,693	88,463
Olson		1941	.....	4,710	4,710
Opp (El Dorado)	Schleicher	1939	325	**	3,154
Ownby		1941	.....	24,717	24,717
Page	Schleicher	1937	14,013	9,753	42,496
Parker	Andrews	1935	11,150	10,016	79,781
Payton	Pecos	1938	707,221	458,714	2,518,676
Pecos-Courtney	Pecos	1930	1,450	**	13,925
Pecos Valley	Pecos	1928	600,819	187,945	2,519,958
Pecos Valley (High Gravity)	Pecos	1941	.....	239,835	
Post City	Garza	1937	4,250	9	915,672
Rhodes		1941	.....	2,061	2,061
Richards (Prior)	Pecos		‡943	**	‡943
Rowan & Tong	Pecos	1929	.....	**	2,000
Sand Hills (Deep)	Crane	1936	113,425	202,717	592,647
Sand Hills (Shallow)	Crane	1934	643,019	970,286	2,939,524
Scanlan	Dawson		.....	**	310
Scarborough	Winkler	1934	508,982	605,089	6,379,171
Scott	Howard	1938	40,112	**	142,965
Seminole	Gaines	1937	986,015	2,592,981	3,894,481
Sharon Ridge (Ira)[5]	Scurry		273,248	426,348	926,490
Shearer	Pecos		301,688	211,343	§513,031
Simpson	Crockett	1938	225	2,633	4,363
Skelly-Grayson	Reagan	1929	30,602	**	623,316
Skelly-Halley	Winkler	1934	536,249	118,933	2,826,928
Slaughter	Hockley	1937	868,882	4,597,849	6,080,350
Snyder	Howard	1937	499,015	358,056	2,051,574
Spencer		1941	.....	6,363	6,363
Swenson	Garza	1939	.....	9	91,515
Taylor-Link	Pecos	1929	620,863	708,127	7,080,265
Toborg	Pecos	1930	605,500	519,859	7,275,819
Todd (Deep)	Crockett	1940	27,250	104,809	132,059
Walker	Pecos	1940	9,450	145,142	154,592
Waples-Platter	Yoakum	1939	13,200	18,268	40,318
Ward County Unclassified	Ward	1929	7,099,752	116,673,578	68,069,907
Wasson[8]	Gaines-Yoakum	1937	11,029,500	12,970,973	32,932,983
Wasson Deep	Gaines-Yoakum	1941	.....	19,058	19,058
West	Yoakum	1938	10,804	8,942	36,106
West Andrews	Andrews	1940	2,250	18,235	20,485
Westbrook	Mitchell-Scurry	1920	260,012	240,751	10,182,683
Wheat	Loving	1926	401,223	402,483	8,605,686
White-Baker	Pecos	1935	59,850	67,896	168,369
World	Crockett	1925	405,404	511,498	7,132,202
Wright	Cochran	1939	4,075	**	7,254
Wyatt[8]	Crockett	1934	5,250	4,164	28,414
Yates	Pecos	1926	6,866,043	5,643,946	259,836,608
Total West Texas	.....	....	84,988,240	91,997,027	1,198,479,827

[1] Also known as Howard-Glasscock.
[2] Also known as McCamey (South).
[3] Also known as Brown-Altman, Keyes, & Sayre.
[4] Also known as Crane-Cowden, Webb-Ray, and Hurdle.
[5] Formerly included with Westbrook.
[6] Includes West Whittenburg and Bennett.
[7] Includes Johnson.
[8] Formerly known as Todd.
[9] Included with Garza (Emerald).
[10] Ward County Unclassified for 1941 includes: Dobbs, 2,280; Estes, 1,943,435; Magnolia-Sealy 323,907; Monroe, 8,778; Shipley 593,322; South Magnolia-Sealy 79,012; Ward North 2,396,270; and Ward South 1,326,574.
* Data available only for 1941.
** Data for 1941 not available.
§ Data available only for 1940 and 1941.
‡ Data available only for 1940.

West Central Texas

Akard	Jones	1938	31,000	77,471	143,703
Amity	Comanche	....	88,261	74,261	***162,522
Ansac	Coleman	1939	50,525	50,382	110,518
Appling	Jones	....	40,371	15,347	***55,718
Aspermont	Stonewall	....	10,331	9,581	***19,912
Avoca	Jones	1937	426,013	404,571	1,782,155
Avoca-West	Jones	1938	418,084	6,281	1,011,400
Baker	Shackelford	1937	3,475	**	**13,533
Ballinger	Runnels	....	19,026	**	**979,113
Barton	Jones-Shackelford	1938	14,776	**	**44,906
Baum	Callahan	1926	17,250	**	**913,168
Beddo	Runnels	1938	17,142	28,570	48,759
Bennett (Southwest Rotan	Fisher	1941	16,625	7,447	57,895
Bluff Creek	Shackelford	1930	351,867	**	**2,911,091
Bowles	Taylor	1939	58,762	14,176	111,794
Boyd	Stonewall	....	8,039	5,832	***13,871
Brockman	Throckmorton	1939	525	**	**1,200
Brown, Miscellaneous	Brown	1902	78,984	484,195	3,141,976
Bull-Acorn	Brown	1928	3,213	**	**131,767
Bunger	Young		62,719	**	**3,905,049
Burkett (Deep)	Coleman	1930	11,650	**	**502,305
Burkett (Shallow)	Coleman	1926	70,725	**	**2,405,991
Burks		1941	.....	186	186
Byler	Brown	1927	10,000	**	**847,911
Byrd Store	Brown	1921	3,603	**	**399,343
Callahan, Miscellaneous	Callahan	1923	220,877	350,952	7,770,339
Carbon	Eastland	....	.....	41,110	†41,110
Carlisle	Stonewall	....	22,897	25,468	***48,365
Childress	Brown	1928	28,539	**	**855,886

West Central Texas—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
Clark-Buffalo	Brown	1928	12,369	**	**788,768
Coleman, Miscellaneous	Coleman	1902	42,149	249,603	2,443,046
Comanche, Miscellaneous	Comanche	....	23,217	22,586	***45,803
Condor-Sales	Jones	1932	455,216	**	**2,626,946
Cook	Shackelford	1926	655,028	**	**16,618,037
Cozart	Callahan	1939	25,226	**	**36,416
Crosscut	Brown	1922	100,121	**	**6,341,230
Curry	Stephens	1921	103,364	**	**13,218,551
Dalton	Palo Pinto	....	*	**	**335,000
Davis	Shackelford	....	*	**	**50,000
Desdemona	Eastland	1919	159,029	**	**23,360,482
Dibbrell	Coleman	1928	38,863	**	**457,262
Duster	Comanche	1938	2,500	**	**5,624
Eastland, Miscellaneous	Eastland	1918	606,519	835,522	66,079,457
Eastland	Coleman	1927	35,037	**	**2,072,588
Eolian (Loving)	Stephens	1939	33,976	**	**35,683
Erath, Miscellaneous	Erath	....	27,947	29,195	***57,142
Featherston	Coleman	1941	.....	444	444
Fisher, Miscellaneous	Fisher	....	†	78,774	†78,774
Fry	Brown	1926	67,863	**	**7,863,406
Frye	Shackelford	1926	11,417	**	**336,976
Gayle	Coleman	....	6,588	11,997	***18,585
George	Brown	1928	30,500	**	**826,667
Goldsboro	Coleman	....	55,413	75,719	***131,132
Graham	Young	....	18,642	**	**1,743,573
Griffin (Avoca West)	Jones	1938	613,116	470,182	1,670,333
Hart	Palo Pinto	....	*	**	**751,000
Haskell, Miscellaneous	Haskell	1938	1,770	12,500	24,526
Hatchett	Callahan	1928	36,273	**	**1,422,123
Hawley	Jones	....	135,509	119,740	***255,249
Herron City	Young	....	13,516	**	**1,690,889
Higgs	Jones	1936	32,059	**	**307,866
Hilburn	Eastland	1920	9,450	**	**1,051,125
Hope	Shackelford	1925	56,500	**	**1,366,869
Howard	Fisher	1934	12,600	**	**173,385
Huddleston	Runnels	1940	3,275	7,169	10,444
Ibex	Shackelford	1921	23,150	**	**2,778,530
Isenhour	Callahan	1923	46,775	**	**2,230,142
Ivy	Shackelford	1937	538,098	441,864	1,544,879
Jennings	Coleman	1938	11,500	**	**493,751
Jim Ned	Coleman	1941	.....	2,370	2,370
Jones, Miscellaneous	Jones	....	832,276	395,259	***1,227,535
King (Hawley)	Jones	1925	138,197	**	**3,024,705
Kisinger	Young	....	90,582	**	**2,716,729
Lake Kirby	Taylor	1940	2,350	3,230	5,580
Lewis-Steffens	Jones	1937	678,189	662,424	2,123,529
Loving	Stephens	....	35,487	59,574	***95,061
Leuders	Jones	1935	26,502	**	**562,379
Mangum	Eastland	1926	45,227	**	**949,731
Martin	Young	1937	8,901	**	**46,206
McCaulley	Fisher	1941	.....	20,930	20,930
McCulloch, Miscellaneous	McCulloch	1935	.....	**	**2,000
McKnight	Throckmorton	1941	.....	12,021	12,021
Merkel	Taylor	1941	.....	9,626	9,626
Moody	Haskell	1928	5,100	**	**114,703
Morris-Buie	Shackelford	....	*	**	**777,000
Moutray	Callahan	1926	68,025	**	**2,567,227
Nail	Shackelford	1927	68,756	48,393	402,448
Ness	Jones	1938	45	**	**3,026
Newell	Shackelford	1924	47,892	**	**1,069,058
Nolan, Miscellaneous	Nolan	....	1,908	636	***2,544
Noodle	Jones	1938	81,117	**	**215,831
Noodle, South	Jones	1941	.....	30,191	30,191
Noodle Creek	Jones	1926	185,016	**	**6,870,652
North Avoca	Jones, Shackelford	1940	3,675	39,613	43,288
North Cisco Lake	Stephens	1939	13,000	**	**29,331
North Novice	Coleman	....	132,208	262,877	***395,085
Novice	Coleman	1938	225,122	33,049	300,762
Nunhall	Young	1938	9,259	**	**31,459
Oplin[1]	Callahan	....	30	**	**6,803
Overall	Coleman	1928	48,500	12,627	1,342,967
Owens	Brown	1938	475	**	**7,866
Palo Pinto, Miscellaneous	Palo Pinto	....	81,600	100,477	1,013,749
Pardue	Haskell	1938	11,406	**	**52,124
Parmer	Eastland	1937	22,869	**	**93,476
Pet. Producers	Shackelford	1929	9,963	**	**163,051
Pioneer	Eastland	1920	63,024	**	**5,553,243
Powers	Shackelford	1941	.....	1,073	1,073
Prichard	Jones	1938	4,589	**	**11,082
Radium[2]	Jones	....	4,706	**	**26,219
Ramsower	Eastland	1928	26,325	**	**1,512,259
Reid (Peniek)	Jones	1940	5,735	16,018	21,753
Rotan (Robinson)	Fisher	1937	227,491	155,196	1,224,092
Royston (Stephens)	Fisher	1928	566,903	395,938	11,233,615
Ruth	Concho	1940	750	**	**750
Santa Anna	Coleman	1923	12,150	**	**455,121
Sayles	Jones	....	212,363	325,152	***537,515
Scranton	Callahan	....	30,415	20,253	***50,668
Sellars	Jones	1933	1,093	**	**32,408
Sewell	Young	1938	255,061	**	**372,818
Shackelford, Miscellaneous	Shackelford	1914	411,269	1,652,002	11,656,725
Silver Valley	Coleman	1941	.....	19,251	19,251
Simmons-Harvey	Jones	1937	10,967	**	**37,709
Simmons-Harvey	Shackelford	1926	24,270	**	**412,710
Sipe Springs	Comanche	1926	110,289	**	**1,582,773
Smith-Ellis	Brown	1927	42,706	**	**2,329,132
South Bend	Young	....	106,796	**	**10,518,175
South Carbon	Eastland	1939	13,507	**	**16,564
South Dyer	Shackelford	1940	7,550	**	**7,550

West Central Texas—Continued

FIELD	COUNTY	Year Found	Barrels in 1940	Barrels in 1941	All Years Cumulative
South View	Taylor	1940	24,806	73,590	98,396
Southwest Cisco	Eastland	1940	3,050	**	**3,050
Southwest Graham	Young	1938	111,204	**	**197,662
Stephens, Miscellaneous	Stephens	....	1,025,652	1,092,547	110,797,559
Stewartson	Coleman	1931	15,751	**	**425,710
Stith	Jones	1940	385	11,018	11,403
Stover	Brown	1925	146,902	**	**7,301,934
Stovall	Young	1940	19,208	**	**19,208
Strand	Jones	1941	.....	9,689	9,689
Strawn	Palo Pinto-Stephens	1915	125,021	**	**7,613,006
Strand, Deep	Stephens	1941	.....	3,124	3,124
Stribling	Stephens	1939	78,415	50,872	137,120
Stroud	Stephens	1939	17,315	**	**18,292
Tannehill-Matthews	Shackelford	1928	112,024	**	**2,384,823
Taylor, Miscellaneous	Taylor	1929	35,629	24,105	376,893
Throckmorton, Miscellaneous	Throckmorton	....	35,750	165,261	930,415
Tipton	Nolan	1939	740	**	**2,150
Triplett	Jones	1940	10,225	27,943	38,168
Tuxedo	Jones	1939	41,950	**	**81,392
West Brownwood (Deep)		1941	.....	3,115	3,115
Wimberly	Jones	1941	.....	18,649	18,649
Wimberly, East	Jones	1941	.....	9,862	9,862
Woodson (Deep)	Throckmorton	1924	40,250	**	**1,861,699
Woodson (Shallow)	Throckmorton	1926	22,652	**	**765,816
Young, Miscellaneous	Young	....	742,027	**	**14,756,258
Total		....	13,747,344	9,719,080	411,483,830

[1] Includes Odin. [2] Includes Chittendon.
† Data available only for 1941. * Production for 1940 included with "Unclassified" fields of county. ** Production for 1941 included with "Unclassified" fields of county.
*** Data available only for 1940 and 1941

Utah

San Juan	San Juan	1910	50	.....	14,000
Virgin	Washington	1908	3,275	4,138	182,663
Total Utah		....	3,325	4,138	196,663

Wyoming

Alkali Butte	Fremont	1928	.....	.....	5,670
Ant Hills	Niobrara	1927	.....	.....	8,719
Badger Basin	Park	1930	87,351	58,350	428,902
Big Muddy	Converse	1922	432,727	421,189	27,017,103
Black Mountain	Hot Springs	1923	.....	33,130	268,784
Bolton Creek	Natrona	1920	.....	.....	27,102
Byron Dome	Big Horn	1922	890,945	1,149,792	5,883,333
Cole Creek	Natrona	1937	157,351	296,581	501,894
Dallas-Derby	Fremont	1883	162,155	153,966	3,093,608
Dewey Dome	Weston	1936	2,182	1,830	23,016
Dutton Creek	Carbon	1926	17,936	17,833	285,277
East Mahoney	Carbon	1940	14,423	65,966	80,389
Elk Basin	Park	1915	207,628	228,072	11,407,326
Ferris	Carbon	1917	.....	.....	481,686
Frannie	Park	1928	933,487	1,097,086	5,599,650
Garland	Big Horn Park	1907	1,076,021	621,713	4,760,764
Grass Creek	Hot Springs	1914	709,108	1,261,723	29,779,925
Greybull	Big Horn	1908	.....	.....	346,730
Hamilton Dome	Hot Springs	1918	183,806	258,340	5,498,245
Hidden Dome	Washakie	1917	26,279	31,560	340,174
Iron Creek	Natrona	1922	4,871	3,471	22,392
La Barge	Lincoln-Sublette	1923	534,915	719,326	7,276,442
Lance Creek	Niobrara	1915	9,324,408	8,990,337	41,074,609
Lander (Hudson)	Fremont	1918	87,717	97,447	2,218,902
Lost Soldier	Sweetwater	1916	842,815	2,313,180	22,930,746
Mahoney Dome	Carbon	1919	159,656	470,224	765,288
Maverick Springs	Fremont	1917	12,366	521,544	533,910
Medicine Bow	Carbon	1934	274,329	251,299	3,795,979
Midway	Natrona	1930	723	.....	175,886
Mule Creek (East)	Niobrara	1920	8,143	144,977	1,348,217
Notches	Natrona	1922	.....	.....	167,114
Oregon Basin	Park	1912	2,031,909	2,650,625	16,332,861
Osage	Weston	1920	213,300	219,000	4,789,118
Pilot Butte	Fremont	1916	2,410	.....	564,272
Plunkett	Fremont	1921	.....	.....	.....
Poison Spider*	Natrona	1918	.....	.....	.....
Quealy	Albany	1933	171,827	159,822	1,558,881
Rex Lake	Albany	1923	173	21,397	249,596
Rock Creek	Carbon	1917	919,284	951,499	20,764,331
Salt Creek	Natrona	1908	5,206,284	5,149,943	298,713,658
Shannon	Natrona	1889	.....	.....	55,441
Shoshone	Park	1928	14,493	14,890	52,979
Simpson Ridge	Carbon	1924	.....	.....	162,485
South Casper Creek	Natrona	1922	117,771	249,301	3,807,582
Spindletop	Natrona	1928	4,192	.....	22,507
Spring Valley	Uintah	1900	.....	.....	101,593
Teapot	Natrona	1922	5,841	4,992	110,593
Torchlight	Big Horn	1915	.....	.....	254,709
Warm Springs	Hot Springs	1917	26,225	25,620	393,375
Waugh Dome	Hot Springs	1933	.....	.....	210,069
Werts	Carbon	1920	988,486	1,727,687	3,973,299
Total Wyoming		....	25,853,537	30,383,712	528,265,131

* Included with South Casper Creek.

Wells Completed

United States Drilling in 1941 Increased 7.4 Percent To 32,265 Wells, Crowding Record Established in 1937

STIMULATED by better prices for crude oil and stronger demand for natural gas, drilling activity in the United States approached in 1941 very near to the record proportions of 1920 and 1937.

Completions of all wells in 1941 totaled 32,265, it was indicated by tabulation of weekly reports for the 52 weeks ended December 27, 1941. On a weekly or daily average basis, the completions of 1941 exceeded by 7.4 percent those of 1940, as there had been only 30,656 completions in the 53 weeks ended December 28, 1940.

The development of 1941 therefore went beyond general expectations of the early part of the year, as many operators at that time had not contemplated drilling as many wells as in 1940; although it was foreseen in this publication's forecast of January, 1941, that the latter half of the year might bring a sharp stepping up of field work, in response to swelling demand—a development that occurred.

The 32,265 completions of 1941 were not far short of the 33,945 recorded by this publication for 1937, which in turn had practically equaled the 33,911 shown by the Bureau of Mines for 1920.

The only years in which United States well completions have exceeded 30,000 have been 1920, 1937, 1940, and 1941.

Contributing toward the increase of 1709 in United States total completions, to 32,265 in 1941 from 30,656 in 1940, were gains for all classes of wells: oil wells, gas wells, dry holes, water intake wells, and miscellaneous completions. Total oil wells, including wells drilled deeper in addition to new wells, aggregated 20,113 in 1941 against 19,875 in 1940. The 20,113 oil well completions of 1941 included 19,519 new wells and 594 old wells drilled deeper and completed in lower horizons; but similar breaking out of deepened wells from the total of 19,875 for 1940 is not possible from the available statistics.

Gas well completions of 1941 totaled 2656 (2585 new and 71 deepened), as compared with a total for 1940 of 2023 (new and old undivided).

Completions of dry holes in 1941 totaled 7147 (6989 new wells and 158 drilled deeper), compared with a total in the previous year of 6770 (new and old).

Completion statistics by fields on pages 106 to 126

Water-intake wells, drilled in water-flooding operations in the Bradford and Allegany districts of New York and Pennsylvania in approximately the same numbers as oil wells, regularly represent a substantial volume of drilling; and in 1941, completions of those wells totaled 2184 (including a few outside New York and Pennsylvania), compared with a recorded total of 1988 (all in the mentioned two states) in 1940. Statistics for 1941 also include 117 gas-input wells and 48 salt-water-disposal wells completed in several states as shown in an accompanying table; but similar statistics for 1940 are not available.

Drilling was up for 1941 in a majority of the states and districts, although some showed decreases, with the most noteworthy gains indicated for the Appalachian states, in reflection of the sharp stepping up of gas-well drilling, induced by heavy demand in war industries of the region. Ohio's total completions were up 60 percent, despite a slight decrease in the number of oil-well completions, as new gas wells placed on production in 1941 totaled 770, against only 412 the previous year. West Virginia, similarly, com-

Wells Drilled for Oil and Gas in the United States—1859-1941

Cumulative totals—1859-1922, Bureau of Mines; 1923-1941 weekly reports by The Oil Weekly.

YEAR	Wells Completed	Oil Wells	Gas Wells	Dry Holes	Water Intake Wells	Initial Oil Production	
						Barrels Daily	Average per Well
1859-1922	615,353	[4]481,863	[1]14,542	118,948	.....	[2]18,842,525	.....
1923	20,513	13,407	1,892	5,214	.....	5,920,019	395
1924	21,713	14,311	2,250	5,152	.....	3,248,211	227
1925	25,406	16,162	2,644	6,600	.....	4,640,924	183
1926	28,995	17,787	2,848	8,360	.....	3,876,811	218
1927	22,301	13,396	2,586	6,319	.....	4,628,246	345
1928	19,964	10,982	2,733	6,249	.....	6,406,370	583
1929	23,463	13,125	3,109	7,229	.....	6,404,145	488
1930	19,848	10,745	3,006	6,097	.....	10,443,833	972
1931	11,716	6,618	2,090	3,008	.....	31,590,024	4,773
1932	14,290	10,151	1,012	3,127	.....	49,471,119	4,873
1933	13,145	7,828	994	3,369	[7]954	21,884,603	2,795
1934	20,793	13,066	1,353	4,678	[7]1,696	31,348,667	2,399
1935	24,273	15,301	1,719	5,588	[7]1,665	32,130,441	2,099
1936	28,546	18,432	2,323	5,695	[7]2,096	22,316,256	1,210
1937	33,945	22,481	2,500	6,370	[7]2,594	24,222,121	1,077
1938	28,060	18,544	1,913	6,133	[7]1,470	16,872,791	909
1939	27,658	17,687	1,943	6,670	[7]1,358	10,512,729	594
1940	[6]30,656	[6]19,875	2,023	6,770	[7]1,988	10,227,178	514
1941	32,265	20,113	2,656	7,147	[8]2,349	8,822,500	438[5]
Total	1,062,903	761,874	[3]56,136	228,723	16,170	[3]323,809,513	[3]

[1] Gas wells during the period prior to 1916 were included with oil wells.
[2] Initial production prior to 1916 not available.
[3] Includes only gas wells completed since 1916.
[4] Includes gas wells completed prior to 1916.
[5] Includes only initial production reported since 1916.
[6] Included with oil wells in 1940 are about 650 old wells drilled deeper or plugged back: Kansas, 250; Oklahoma, 400.
[7] In Pennsylvania and New York.
[8] Includes 2,184 water intake wells (mostly in Pennsylvania and New York), 117 gas input wells, and 48 salt water disposal wells.

Details of Miscellaneous Well Completions in the United States in 1941

This table shows details on "miscellaneous" completions included in main table below.

STATE OR DISTRICT	OLD WELLS DEEPENED					Water Input	Gas Input	Salt Water Disposal	Total Miscellaneous
	Oil	Gas	Dry	Total	Initial Production				
Arkansas	1	....	1	2	57	....	....	....	2
Colorado	....	....	1	1	.....	....	....	....	1
Illinois	206	....	36	242	24,017	....	32	12	286
Indiana	14	....	12	26	1,385	....	1	2	29
Kansas	95	2	11	108	111,954	2	....	16	126
Kentucky	8	....	4	12	505	5	1	....	18
Louisiana	....	....	3	3	.....	....	....	....	3
North Louisiana	....	....	2	2	.....	....	....	....	2
South Louisiana	....	....	1	1	.....	....	....	....	1
Michigan	2	....	1	3	5,400	....	....	....	3
Mississippi	....	....	....	....	.....	....	....	1	1
Nebraska	10	....	2	12	2,887	....	....	....	12
New Mexico	2	....	2	4	520	....	....	....	4
New York: Allegany	....	....	....	....	.....	441	....	....	441
Ohio	1	15	2	18	1	57	51	....	126
Oklahoma	159	7	34	200	35,649	3	19	10	232
Pennsylvania	....	14	2	16	.....	1,675	....	....	1,691
Texas	77	7	43	127	23,252	1	13	7	148
East Texas Field	....	....	....	....	.....	....	....	5	5
Rest of East Texas	....	....	4	4	.....	....	....	1	5
North Texas	22	1	20	43	7,683	1	12	....	56
South Texas	10	5	9	24	3,161	....	....	....	24
Corpus Christi	9	....	3	12	3,085	....	....	....	12
Laredo	1	5	3	9	76	....	....	....	9
San Antonio	....	....	3	3	.....	....	....	....	3
Texas Panhandle	1	....	....	1	123	....	....	....	1
West Texas	42	1	9	52	12,080	....	....	1	53
West Central Texas	2	....	1	3	205	....	1	....	4
West Virginia	4	24	4	32	11	....	....	....	32
Wyoming	15	2	....	17	5,007	....	....	....	17
Total United States	594	71	158	823	210,645	2,184	117	48	3,172

pleted fewer oil wells but showed a 22 percent increase in total completions, as 508 new gas wells were put on production, compared with only 419 in 1940. Pennsylvania's completions went up 9 percent (to 3944 from 3690), as new gas wells increased to 409 in 1941 from 281 in 1940, while oil well completions rose to 1722 from 1682. New York had a 19-percent increase in completions, due wholly to a gain in new oil wells to 674 from 533.

Mississippi had only a few more completions in 1941 than in the previous year, as did Arkansas and Oklahoma, while Illinois had a few less. Louisiana showed a 7 percent decrease in weekly average completions, as a 17-percent decrease on the Gulf Coast outweighed a 9 percent increase for North Louisiana. Texas completions were up 9 percent, in reflection of substantial gains in North Texas, Eastern Texas, West Texas, the Panhandle, and the Corpus Christi and San Antonio districts of South Texas, which more than offset decreases in West Central Texas, the Gulf Coast, and the Laredo area of South Texas.

Michigan registered a 25-percent decrease in completions for 1941, and California showed a 16-percent increase.

Wells Completed in the United States in 1940 and 1941

STATE	TOTAL COMPLETIONS			NEW WELLS DRILLED FOR OIL OR GAS						[11]Miscellaneous Completions		Initial Oil Production (Barrels Daily)	
				Oil Wells		Gas Wells		Dry Holes					
	[6]1940	[7]1941	Percent Change in Weekly Average	[12]1940	1941	[13]1940	1941	[13]1940	1941	[14]1940	1941	1940	1941
Alabama	10	5	— 50.0	.....	.....	.....	.....	10	5	.....	.....	.....	.....
Arkansas	179	185	+ 5.4	122	108	8	4	49	71	.....	2	33,982	23,502
California[8]	1,030	1,173	+ 16.1	859	964	15	25	156	184	.....	.....	765,299	682,343
Colorado	10	21	+113.8	5	8	1	4	4	8	.....	1	1,039	3,080
Florida	1	1	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....
Georgia	....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Illinois	3,947	3,935	+ 1.6	3,184	2,787	26	13	737	849	.....	286	1,922,997	797,583
Indiana	532	546	+ 4.6	249	262	70	52	213	203	.....	29	33,765	34,007
Iowa	1	6	+505.3	.....	.....	.....	.....	1	6	.....	.....	.....	.....
Kansas	[2]2,007	2,217	+ 12.6	1,538	1,432	60	72	409	587	.....	126	2,345,502	1,879,917
Kentucky	367	335	— 6.9	168	133	8	7	191	177	.....	18	10,519	6,447
Louisiana	1,704	1,557	— 6.9	1,220	1,015	99	96	385	443	.....	3	290,216	195,909
North Louisiana	657	702	+ 8.9	452	429	82	78	123	193	.....	2	50,488	46,530
South Louisiana	1,047	855	— 16.8	768	586	17	18	262	250	.....	1	239,728	149,379
Michigan	1,193	885	— 24.4	566	413	59	84	568	385	.....	3	104,513	372,872
Mississippi	190	198	+ 6.2	99	151	1	4	90	42	.....	1	55,141	90,499
Missouri[10]	93	85	— 0.1	5	.....	30	18	58	67	.....	.....	48	.....
Montana	192	250	+ 32.7	140	139	26	61	26	50	.....	.....	15,368	20,817
Nebraska	53	93	+ 78.8	23	39	.....	.....	30	42	.....	12	14,032	16,937
New Mexico	623	397	— 35.0	487	297	18	15	118	81	.....	4	178,293	66,011
New York	957	1,119	+ 19.2	533	674	9	3	9	1	[9]406	441	3,368	4,839
Ohio	1,132	1,774	+ 59.7	429	421	412	770	291	457	.....	126	4,733	10,995
Oklahoma	[2]2,147	2,162	+ 2.6	1,225	1,169	182	154	740	607	.....	232	304,356	394,750
Pennsylvania[9]	3,690	3,944	+ 8.9	1,682	1,722	281	409	145	122	[4]1,582	1,691	4,984	2,355
South Dakota	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Tennessee[3]	27	23	— 13.2	3	.....	.....	5	24	18	.....	.....	332	.....
Texas	9,775	10,439	+ 8.8	7,107	7,575	291	275	2,377	2,441	.....	148	4,045,397	4,175,995
East Texas Field	323	513	+ 61.9	308	490	.....	.....	15	18	.....	5	580,960	877,317
East Texas Border Co.'s	27	33	+ 24.8	4	7	10	11	13	15	.....	.....	346	584
Rest of East Texas	265	570	+119.2	125	376	41	37	99	152	.....	5	29,331	130,712
North Texas	2,154	2,462	+ 16.5	1,468	1,565	14	12	672	829	.....	56	749,031	505,977
South Texas	2,559	2,401	— 4.4	1,624	1,569	77	97	858	711	.....	24	636,051	576,223
Corpus Christi	1,263	1,304	+ 5.2	914	972	35	47	314	273	.....	12	496,158	448,965
Laredo	1,043	808	— 21.0	613	444	39	46	391	309	.....	9	129,432	111,371
San Antonio	253	289	+ 16.4	97	153	3	4	153	129	.....	3	10,461	15,887
Texas Gulf Coast	1,185	742	— 36.2	941	548	25	25	219	169	.....	.....	241,119	126,194
Texas Panhandle	627	708	+ 15.1	517	636	83	45	27	26	.....	1	143,333	138,340
West Texas	1,937	2,365	+ 24.4	1,786	2,110	12	11	139	191	.....	53	1,600,399	1,782,114
West Central Texas	698	645	— 5.8	334	274	29	37	335	330	.....	4	64,827	38,534
Utah	3	3	.....	.....	.....	3	1	.....	2	.....	.....	.....	.....
West Virginia	649	774	+ 21.5	120	115	419	508	110	119	.....	32	905	1,746
Wyoming	143	137	— 2.3	111	95	5	5	27	20	.....	17	92,389	41,896
Total United States	30,656	32,265	+ 7.4	19,875	19,519	2,023	2,585	6,770	6,989	1,988	3,172	10,227,178	8,822,500

[1] Includes approximately 250 old wells drilled deeper or plugged back.
[2] Includes approximately 400 old wells drilled deeper or plugged back.
[3] Figures by Tennessee Division of Geology.
[4] Includes 1,562 water intake wells in Bradford District and 20 in Middle District.
[6] All these are water intake wells in Allegany District.
[6] Wells completed in 53 weeks, or 371 days, ended Dec. 28, 1940.
[7] Wells completed in 52 weeks, or 364 days, ended Dec. 27, 1941.
[8] California figures are from American Petroleum Institute except for December, 1941.
[9] Bradford, Pennsylvania, figures are from The Producers Monthly.
[10] Missouri figures are from the Missouri Geological Survey.
[11] Details on miscellaneous completions of 1941 appear in separate table; some such completions of 1940 were included with regular completions; see footnotes to figures on total completions in 1940 in Kansas and Oklahoma. [12] Includes wells drilled deeper, especially about 250 in Kansas and 400 in Oklahoma, separation not being available. [13] Includes wells drilled deeper, separation not being available. [14] Data for 1940 low as compared with 1941 to extent that 1940's old wells drilled deeper were included along with the new wells, whereas 1941's "drilled deeper" wells are here shown as "miscellaneous completions." Also, data available for 1941 but not for 1940 or gas injection wells, salt water disposal wells, and water intake wells outside New York and Pennsylvania.

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United States Summary

(Note: Given below, along with details of drilling by counties and fields, are summaries for individual states and districts, showing for each district the number of wells drilled deeper, water input wells, gas input wells, and salt water disposal wells, in addition to details on new wells drilled for oil or gas.)

Kind of Completion	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
1941—					
New wells drilled drilled for Oil or Gas	20,093	19,519	2,585	6,989	8,611,855
Wells drilled deeper	823	594	71	158	210,645
Water input wells	2,184	.....	.....	.....	.....
Gas input wells	117	.....	.....	.....	.....
Salt water disposal wells	48	.....	.....	.....	.....
Total, 1941	32,265	20,113	2,656	7,147	8,822,500
1940—					
New wells drilled for Oil and Gas (Including about 650 wells drilled deeper in Oklahoma and Kansas and miscellaneous completions in all states)	28,668	19,875	2,023	6,770	10,227,178
Water Input Wells in Bradford and Allegany Districts, Pennsylvania-New York	1,988	.....	.....	.....	.....
Total, 1940	30,656	19,875	2,023	6,770	10,227,178

Alabama

(all wildcats)

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Clarke	1	.....	.....	1	.....
Fayette	1	.....	.....	1	.....
Lauderdale	1	.....	.....	1	.....
Madison	2	.....	.....	2	.....
Total, 1941	5	.....	.....	5	.....
Total, 1940	10	.....	.....	10	.....

Arkansas

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	183	108	4	71	23,445
Wells drilled deeper	2	1	....	1	57
Total, 1941	185	109	4	72	23,502
Total, 1940	179	122	8	49	33,982
New Wells Drilled for Oil or Gas					
Arkansas:					
Wildcat	1	.....	.....	1	.....
Clark:					
Wildcats	9	.....	.....	9	.....
Columbia:					
Atlanta	5	5	....	....	1,385
Dorcheat	8	8	....	....	2,302
Macedonia	5	5	....	....	1,821
Magnolia	4	1	....	3	570
Stephens	10	9	....	1	1,579
Village	1	1	....	....	60
Wildcats	4	1	....	3	336
Crawford:					
Alma	1	.....	1	....	.....
Franklin:					
Wildcat	1	.....	.....	1	.....
Jefferson:					
Wildcat	1	.....	.....	1	.....
Lafayette:					
Buckner	4	4	....	....	1,728
McKamie	14	13	....	1	5,571
Wildcats	2	1	....	1	255
Lee:					
Wildcat	1	.....	.....	1	.....
Magnolia:					
Dorcheat	2	2	....	....	320
Miller:					
Fouke	9	6	....	3	1,501
Wildcats	1	.....	.....	1	.....
Nevada:					
Troy	10	9	....	1	512
Wildcats	3	.....	.....	3	.....

(Continued in next column)

Arkansas—Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Ouachita:					
Bragg	2	.....	.....	2	.....
Mount Holly	2	.....	.....	2	.....
Smackover	2	1	....	1	58
Smackover, Snow Hill	1	1	....	....	100
Stephens	3	1	....	2	10
Troy	1	.....	.....	1	.....
Wildcats	3	1	....	2	50
St. Francis:					
Wildcats	2	.....	.....	2	.....
Sebastian:					
Alma	1	.....	1	....	.....
Sevier:					
Wildcat	1	.....	.....	1	.....
Union:					
East Schuler	3	3	....	....	710
El Dorado	7	4	....	3	134
Hibank	1	.....	.....	1	.....
Nick Springs-Rainbow City	2	2	....	....	320
Rainbow City	3	1	....	2	100
Rainbow City (Champagnolle)	3	1	....	2	100
Schuler	2	1	....	1	135
Smackover	14	10	....	4	970
Urbana	27	15	2	10	2,135
Woodley	1	.....	.....	1	.....
Wildcats	4	2	....	2	683
Woodruff:					
Wildcats	2	.....	.....	2	.....
Total, 1941	183	108	4	71	23,445
Wells Drilled Deeper					
Ouachita:					
Smackover	2	1	....	1	57
Total, 1941	2	1	....	1	57

California

Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
San Joaquin Valley					
Belridge, North	7	7	....	....	2,130
Belridge, South	1	1	....	....	110
Coalinga	75	72	....	3	125,624
Cole's Levee	33	29	3	1	20,536
Dyer Creek	2	1	....	1	184
Edison	9	9	....	....	1,013
Elk Hills	9	9	....	....	3,230
Fruitvale	2	2	....	....	240
Greeley	27	27	....	....	47,647
Helm	1	1	....	....	260
Jacalitos	1	1	....	....	128
Kern River	24	23	....	1	1,951
Kettleman Hills, N. Dome	21	18	....	3	8,287
Lost Hills	5	3	....	2	18
McKittrick	12	8	....	4	1,195
Midway-Sunset	15	13	....	2	745
Mountain View	1	1	....	....	50
Mount Poso	67	63	....	4	14,667
Paloma	3	2	....	1	2,020
Raisin City	9	8	....	1	3,336
Rio Bravo	26	26	....	....	36,231
Round Mountain	13	8	....	5	1,423
Shafter	1	1	....	....	488
Strand	6	3	....	3	6,405
Ten Sections	39	39	....	....	59,556
Tupman	15	15	....	....	16,239
Union Avenue	6	3	1	2	245
Wasco	1	1	....	....	3,136
Wheeler Ridge	1	.....	.....	1	.....
Total, 1941	432	394	4	34	357,094
Total, 1940	435	401	....	34	488,106
Coastal District					
Canitan	5	5	....	....	21,182
Elwood	2	1	1	....	500
Rincon	10	9	....	1	1,656
San Miguelito	10	10	....	....	7,492
Santa Barbara	2	1	....	1	25
Santa Maria	7	5	....	2	2,270
Santa Maria Valley	66	63	....	3	47,871
Summerland	1	.....	.....	1	.....
Ventura Avenue	45	42	....	3	56,742
Ventura-Newhall	56	39	....	17	34,733
Total, 1941	204	175	1	28	172,471
Total, 1940	131	110	....	21	109,283

(Continued in next column)

California—Continued

Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Los Angeles Basin					
Brea-Olinda	2	2	....	....	80
Coyote, East	7	7	....	....	1,701
Coyote, West	3	3	....	....	1,073
Domingues	55	50	....	5	23,959
Huntington Beach	60	56	....	4	21,188
Inglewood	21	19	....	2	26,303
Long Beach	29	26	....	3	4,243
Montebello	6	2	....	4	397
Potrero	3	3	....	....	920
Richfield	2	2	....	....	40
Rosecrans	19	13	....	6	1,846
Santa Fe Springs	4	3	1	....	257
Seal Beach	7	7	....	....	5,990
Torrance	19	17	....	2	1,760
Turnbull Canyon	1	1	....	....	225
Whittier	2	2	....	....	125
Wilmington	184	182	....	2	62,671
Total, 1941	424	395	1	28	152,778
Total, 1940	389	366	....	23	172,220
Gas Fields					
McDonald Island	1	.....	1	....	.....
Rio Vista	17	.....	16	1	.....
Vernalis	2	.....	2	....	.....
Total, 1941	20	.....	19	1	.....
Total, 1940	16	.....	14	2	.....
Miscellaneous Drilling					
Wildcats	93	.....	.....	93	.....
Total, 1941	93	.....	.....	93	.....
Total, 1940	80	.....	2	78	.....
Total California, 1941	1,173	964	25	184	682,343
Total California, 1940	1,030	859	15	156	765,299

Colorado

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	20	8	4	8	3,080
Wells drilled deeper	1	.....	.....	1	.....
Total, 1941	21	8	4	9	3,080
Total, 1940	10	5	1	4	1,039
New Wells Drilled for Oil or Gas					
Boulder:					
Warren	1	.....	.....	1	.....
Fremont:					
Florence	1	1	....	....	15
Huerfano:					
Alamo	1	.....	.....	1	.....
Logan:					
Sterling	1	.....	.....	1	.....
Moffat:					
E. Hiawatha	2	2	....	....	440
Hiawatha	1	.....	1	....	.....
Iles	2	1	....	1	1,584
Powder Wash	3	.....	2	1	.....
W. Hiawatha	1	.....	1	....	.....
Park:					
South Park	1	.....	.....	1	.....
Rio Blanco:					
Rangely	2	2	....	....	125
Wilson Creek	2	2	....	....	916
Routt:					
Trull	1	.....	.....	1	.....
Washington:					
Thurman	1	.....	.....	1	.....
Total, 1941	20	8	4	8	3,080
Total, 1940	.....	.....	.....	.....	.....
Wells Drilled Deeper					
Rio Blanco:					
Rangely	1	.....	.....	1	.....
Total, 1941	1	.....	.....	1	.....

(Continued on page 108)

OIL WEEKLY EDITION

BAASH ROSS News

BAASH-ROSS TOOL COMPANY • LOS ANGELES • HOUSTON • NEW YORK

A MONTHLY BULLETIN COVERING NEWS OF EQUIPMENT AND OPERATIONS IN THE PETROLEUM INDUSTRY

How to get longer life, better performance from your present drilling equipment

THE IMPORTANCE OF LOW STARTING RESISTANCE TO SMOOTH KELLY FEED

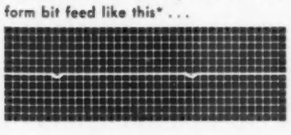
There's a lot more to the remarkable efficiency of the Baash-Ross Roller Kelly Bushing than first meets the eye. It has to do with the basic engineering differences between *sliding* friction and *rolling* friction . . .

First, of course, is the obvious fact that when one surface *slides* against another, the frictional resistance is many times greater than when one surface *rolls* against another. But not so well known is the fact that in *sliding* friction it takes even more effort to start the surfaces sliding than it does to *keep* them sliding once they are in motion.

In rolling friction, however, this high starting resistance is not present . . . an important engineering advantage that greatly affects the efficiency of your kelly feed. Here's why . . .

With the conventional kelly bushing, as you let up on the brake to feed weight to the bit, there is relatively high initial resistance to be overcome just to start the string in downward motion. Once it starts moving, however, the frictional resistance decreases and the string drops faster . . . with the result that too much weight is applied before the driller can check the acceleration. This results in a series of weight surges like this* every time weight is fed off . . .

But in the B-R *Roller* Bushing there is no high starting resistance. The string responds *instantly* to the brake and only the exact amount of weight the bit requires is fed off, resulting in smooth uniform bit feed like this* . . .



▶ This smooth uniform feed eliminates damaging torsional surges and pounding impact stresses in drill string and rig equipment . . . insures higher drilling efficiency, longer equipment life!

**Charts taken from actual field tests.*

IF there ever was a time when conservation of equipment was important . . . when it was absolutely imperative that you get maximum life and efficiency from *every* item in your drilling equipment . . . *that time is NOW!*

And that is why, of all the items in the Baash-Ross line of quality oil tools, we feel that right now one tool in particular will do more to conserve your drilling equipment . . . more to cut your costs and prolong operating life . . . than any other investment you can make. And that tool is the *Baash-Ross Type 2R Roller Kelly Drive Bushing!*

We say this because operating records on well after well have conclusively proven that it not only increases drilling efficiency, but also prolongs the operating life of at least *five* other items of your drilling rig.

Here's the reason: Due to the high starting resistance in conventional kelly bushings (see column 1), every time weight is fed to the bit there is a tendency to "over-feed." This causes damaging torsional surges in the drill string and pounding impact loads on the table bearings, the swivel bearings, the wire line and the bit. Keep that up day after day, month after month, and it can't help but shorten the life of your equipment!

But because the B-R *Roller* Bushing has NO high starting resistance—and because it gives instant, friction-free kelly feed at *all* drilling speeds, under *all* conditions—it enables the driller to control bit feed more accurately, more sensitively, than with any other bushing in the field today. This in turn eliminates sudden torsional strains in the string and their damaging effect on your costly drilling equipment. It means . . .

▶ **LONGER DRILL PIPE LIFE:** The smooth effortless feed of the Baash-Ross Kelly Bushing prolongs the life of the drill string, reduces strain on threaded connections and minimizes danger of twist-offs.

▶ **HIGHER BIT EFFICIENCY:** Because the Baash-Ross Roller Bushing enables the driller to feed weight to the bit evenly and accurately, the bit cuts hour after hour at its most efficient rate. There are no sudden "bites" into the formation—no "over-feeding" to shorten bit life and decrease over-all drilling efficiency. And longer life per bit means not only faster, more economical drilling, but fewer round trips—with a consequent saving on power and depreciation.

A copy of Bulletin 4C which fully describes the Baash-Ross Roller Kelly Bushing will gladly be sent on request.

▶ **LONGER TABLE LIFE:** Sudden torsional surges in the drill string are very damaging to the rotary table bearings. But the Baash-Ross Kelly Bushing, by smoothing out kelly feed, eliminates these sudden impacts on the bearings, materially increasing the operating life of the table.

▶ **LESS SWIVEL WEAR:** The heart of a swivel is the thrust bearing upon which the entire weight of the string is rotated. Weight surges in the drill string cause pounding hammer-like blows against this bearing. Reduce these blows and you greatly prolong the life of the swivel . . . *which is exactly what the smoother, more accurate feed of the Roller Kelly Bushing does!*

BUT THAT'S ONLY PART OF THE STORY. This bushing also conserves on maintenance, for all you do is keep the bushing lubricated through the easy-to-reach grease fittings—a quick, simple operation—and the bushing gives trouble-free service for thousands upon thousands of feet of hole. A typical example is the Baash-Ross "2R" Bushing that recently came in for its *first* servicing after more than *183,000 feet* of drilling. That's equivalent to more than *thirty-six* 5000 foot wells without any maintenance except lubrication!

AND STILL ANOTHER important conservation feature is the fact that in this bushing practically all of the wear is taken by inexpensive roller bushings. By simply replacing these small bushings after thousands of feet of hard service, your Kelly Bushing is again restored to top-notch shape, ready for thousands more feet of service.

We honestly believe that every operator—regardless of the type of rotary equipment he is using, the formations he is working in, or the depths to which he is drilling—can do more to reduce his per-foot cost of hole and to increase the life of his equipment by installing a Baash-Ross Roller Kelly Bushing than by the addition of *any other single item of equipment.* That's a big statement, but we'll stand squarely behind it. Let our nearest representative explain in detail just how this bushing—whether used with square or hex kellys—will save on YOUR particular drilling operations!

ON THE LOOKOUT

A NEW RUBBER "SHOCK ABSORBER" *for Vee-belt pulleys is designed to increase the efficiency and durability of the belts by supporting them and forcing them to ride properly in the groove. Easily installed in a few minutes, the shock absorbers are said to reduce belt slippage . . . to prolong belt life on worn pulleys . . . and to reduce belt wear.* **(No. 211)**

BAASH-ROSS

MAINTENANCE ENGINEERS *faced with the problem of making present equipment last longer should find helpful a new booklet recently published on the fatigue of metals. It discusses fatigue from the designing engineer's viewpoint, and illustrates with charts and diagrams applications of the various mathematical formulas used.* **(No.212)**

BAASH-ROSS

CEMENT PLUGS CAN BE REMOVED *without drilling and without pulling tubing by use of an acid jet gun recently developed. Special nipple attached to tubing provides a seat for the gun—which is simply dropped down the tubing. A seven percent acid is then pumped down the tubing and out through the gun jets . . . removing cement plugs . . . cleaning cement coatings from oil sands . . . or drilling out limestone without pipe or bit, according to the report.* **(No. 213)**

For additional information on these items, send on a post card or letterhead your name, address and key number of items that interest you.

Florida

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Dade:					
Wildcat	1	.....	.....	1	.....
Total, 1941	1	.....	.....	1	.....
Total, 1940	1	.....	.....	1	.....

Georgia

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Clinch:					
Wildcat	1	.....	.....	1	.....
Total, 1941	1	.....	.....	1	.....
Total, 1940	.....	.....	.....	.....	.....

Illinois

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	3,649	2,787	13	849	773,566
Wells drilled deeper	242	206	.....	36	24,017
Gas input wells	32	.....	.....	.....	.....
Salt water disposal wells	12	.....	.....	.....	.....
Total, 1941	3,935	2,993	13	885	797,583
Total, 1940	3,947	3,184	26	737	1,922,997
New Wells Drilled for Oil or Gas					
Alexander	1	.....	.....	1	.....
Bond	32	6	.....	26	220
Cass	1	.....	.....	1	.....
Champaign	10	.....	.....	10	.....
Christian	3	.....	.....	3	.....
Clark	17	7	.....	10	91
Clay	85	58	.....	27	9,885
Clinton	61	24	1	36	1,049
Coles	7	1	1	5	58
Crawford	6	2	.....	4	96
Douglas	1	.....	.....	1	.....
Edgar	7	.....	1	6	.....
Edwards	45	33	.....	12	17,371
Effingham	28	16	.....	12	1,853
Fayette	248	205	.....	43	33,442
Franklin	260	220	.....	40	62,268
Gallatin	99	67	.....	32	9,261
Greene	4	1	.....	3	10
Hamilton	391	342	.....	49	101,825
Jackson	9	2	.....	7	46
Jasper	174	141	.....	33	66,357
Jefferson	156	121	.....	35	42,181
Jersey	1	.....	.....	1	.....
Johnson	1	.....	.....	1	.....
La Salle	3	.....	.....	3	.....
Lawrence	37	14	7	16	753
Logan	1	.....	.....	1	.....
McLean	1	.....	.....	1	.....
Macon	2	.....	.....	2	.....
Macoupin	8	3	.....	5	46
Madison	6	.....	.....	6	.....
Marion	131	96	.....	35	10,961
Monroe	3	3	.....	.....	50
Montgomery	17	.....	.....	17	.....
Morgan	3	.....	.....	3	.....
Moultrie	1	.....	.....	1	.....
Perry	4	.....	.....	4	.....
Piatt	1	.....	.....	1	.....
Pope	2	.....	.....	2	.....
Pulaski	1	.....	.....	1	.....
Randolph	7	.....	.....	7	.....
Richland	93	61	1	31	22,853
St. Clair	36	20	.....	16	1,952
Saline	8	1	.....	7	92
Shelby	17	2	.....	15	62
Taswell	1	.....	.....	1	.....
Vermillion	1	.....	.....	1	.....
Wabash	333	255	1	77	31,603
Washington	59	35	.....	24	3,268
Wayne	395	332	.....	63	240,389
White	821	719	1	101	115,524
Williamson	10	.....	.....	10	.....
Total, 1941	3,649	2,787	13	849	773,566
Wells Drilled Deeper					
Bond	4	1	.....	3	64
Champaign	1	.....	.....	1	.....
Clark	1	1	.....	.....	15

(Continued in next column)

Illinois—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Clay	2	1	.....	1	29
Clinton	4	1	.....	3	165
Coles	1	.....	.....	1	.....
Crawford	1	.....	.....	1	.....
De Kalb	1	.....	.....	1	.....
Edwards	4	4	.....	.....	540
Fayette	21	20	.....	1	2,294
Franklin	1	.....	.....	1	.....
Gallatin	4	1	.....	3	90
Hamilton	28	28	.....	.....	6,434
Jefferson	2	2	.....	.....	568
La Salle	1	.....	.....	1	.....
Lawrence	4	1	.....	3	13
Madison	1	.....	.....	1	.....
Marion	107	105	.....	2	9,789
Montgomery	2	.....	.....	2	.....
Randolph	1	.....	.....	1	.....
Richland	3	3	.....	.....	47
Saline	1	.....	.....	1	.....
Shelby	2	.....	.....	2	.....
Wabash	6	4	.....	2	166
Washington	1	1	.....	.....	125
Wayne	5	4	.....	1	867
White	33	29	.....	4	2,811
Total, 1941	242	206	.....	36	24,017
Gas Input Wells					
Fayette	17	.....	.....	.....	.....
Marion	15	.....	.....	.....	.....
Total, 1941	32	.....	.....	.....	.....
Salt Water Disposal Wells					
Clinton	1	.....	.....	.....	.....
Fayette	3	.....	.....	.....	.....
Gallatin	1	.....	.....	.....	.....
Jefferson	2	.....	.....	.....	.....
Marion	2	.....	.....	.....	.....
Washington	3	.....	.....	.....	.....
Total, 1941	12	.....	.....	.....	.....

Indiana

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	517	262	52	203	32,622
Wells drilled deeper	26	14	.....	12	1,385
Gas input wells	1	.....	.....	.....	.....
Salt water disposal wells	2	.....	.....	.....	.....
Total, 1941	546	276	52	215	34,007
Total, 1940	532	249	70	213	33,765
New Wells Drilled for Oil or Gas					
Blackford	3	.....	2	1	.....
Crawford	1	.....	.....	1	.....
Daviess	30	11	8	11	168
Decatur	11	.....	11	.....	.....
Dubois	4	2	1	1	4
Elkhart	10	2	.....	8	40
Fountain	1	.....	.....	1	.....
Gibson	156	128	.....	28	20,127
Greene	4	.....	1	3	.....
Hamilton	2	1	.....	1	30
Harrison	9	.....	5	4	.....
Henry	1	.....	1	.....	.....
Huntington	1	.....	.....	1	.....
Jasper	5	.....	.....	5	.....
Jay	8	1	3	4	3
Knox	14	.....	.....	14	.....
Lake	1	.....	.....	1	.....
LaPorte	1	.....	.....	1	.....
Madison	2	.....	1	1	.....
Marion	1	.....	.....	1	.....
Marshall	1	.....	1	.....	.....
Martin	1	.....	.....	1	.....
Monroe	8	2	2	4	116
Newton	2	.....	.....	2	.....
Perry	1	.....	.....	1	.....
Pike	12	3	2	7	76
Porter	3	.....	.....	3	.....
Posey	124	82	.....	42	10,408
Pulaski	3	.....	.....	3	.....
Randolph	4	.....	1	3	.....
Ripley	1	.....	1	.....	.....
Rush	1	.....	1	.....	.....
St. Joseph	1	.....	.....	1	.....
Shelby	2	1	.....	1	25
Spencer	32	14	3	15	1,157
Starke	3	.....	.....	3	.....
Steuben	1	.....	.....	1	.....
Sullivan	19	2	5	12	11

(Continued in next column)

Indiana—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Vanderburg	19	11	.....	8	253
Vigo	8	2	.....	6	204
Warrick	1	.....	.....	1	.....
Wayne	2	.....	2	.....	.....
Wells	1	.....	1	.....	.....
White	2	.....	.....	2	.....
Total, 1941	517	262	52	203	32,622
Wells Drilled Deeper					
Daviess	3	.....	.....	3	.....
Dubois	1	.....	.....	1	.....
Elkhart	1	.....	.....	1	.....
Gibson	5	5	.....	.....	663
Knox	1	.....	.....	1	.....
Newton	1	.....	.....	1	.....
Orange	1	.....	.....	1	.....
Parke	1	.....	.....	1	.....
Posey	10	9	.....	1	722
Sullivan	2	.....	.....	2	.....
Total, 1941	26	14	.....	12	1,385
Gas Input Well					
Posey	1	.....	.....	.....	.....
Total, 1941	1	.....	.....	.....	.....
Salt Water Disposal Wells					
Gibson	1	.....	.....	.....	.....
Posey	1	.....	.....	.....	.....
Total, 1941	2	.....	.....	.....	.....

Iowa
(all wildcats)

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Fremont	2	.....	.....	2	.....
Guthrie	1	.....	.....	1	.....
Montgomery	1	.....	.....	1	.....
Taylor	2	.....	.....	2	.....
Total, 1941	6	.....	.....	6	.....
Total, 1940	1	.....	.....	1	.....

Kansas

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	2,091	1,432	72	587	1,767,963
Wells drilled deeper	108	95	2	11	111,954
Input wells	2	.....	.....	.....	.....
Salt water disposal wells	16	.....	.....	.....	.....
Total, 1941	2,217	1,527	74	598	1,879,917
Total, 1940	2,007*	1,538	60	409	2,345,502

* Total completions for Kansas in 1940 included approximately 250 old wells drilled deeper or plugged back.

New Wells Drilled for Oil or Gas					
Barber	12	5	2	5	4,697
Barton	315	211	4	100	324,284
Brown	1	.....	.....	1	.....
Butler	127	95	.....	32	7,564
Chautauqua	1	.....	.....	1	.....
Coffey	4	1	.....	3	15
Cowley	62	33	1	28	19,545
Dickinson	1	.....	.....	1	.....
Doniphan	1	.....	.....	1	.....
Douglas	2	.....	.....	2	.....
Edwards	3	.....	.....	3	.....
Elk	6	2	.....	4	65
Ellis	161	129	.....	32	302,474
Ellsworth	123	99	1	23	136,383
Franklin	1	.....	.....	1	.....
Finney	2	.....	2	.....	.....
Graham	14	2	.....	12	271
Grant	2	.....	2	.....	.....
Greenwood	102	62	3	37	1,677
Harvey	11	7	.....	4	1,884
Jefferson	48	3	28	17	90
Jewell	1	.....	.....	1	.....
Kearney	3	2	.....	1	3,218
Kingman	5	2	1	2	1,045
Leavenworth	13	4	3	6	227

(Continued on page 110)

THIS PRODUCTION SUPERINTENDENT RESTS EASY . . .

Why shouldn't he when the last well on the lease was switched to Axelson Sucker Rods last week. Took him nearly two years to get everybody to see things his way, but it was worth the effort.

First he sold the engineering department on running some rod tests. These tests proved Axelson Rod Stocks chemicals and physicals really gave the best tensile strength and ductility with maximum resistance to fatigue. Next he convinced "the old man" that it didn't pay to buy some things such as sucker rods on a reciprocity basis. Last he took his lease figures on the savings in downtime, pulling jobs and longer rod wear to the purchasing department for them to include in the all-over cost analysis they kept on each string of sucker rods the company bought.

Rod trouble today is the least of his worries. Why don't you put yourself in the same spot?

AXELSON MANUFACTURING CO.

P. O. Box 98, Vernon Station, Los Angeles, Calif. • St. Louis • 50 Church St., New York Tulsa • *Mid-Continent and Eastern Distributor:* Frick Reid Supply Corp. • *Rocky Mountain Distributor:* Great Northern Tool & Supply Co.

AXELSON SELLS & *SERVICES* DEEP WELL PLUNGER PUMPS AND SUCKER RODS

Kansas—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Lyon	3	1	....	2	45
McPherson	53	38	....	15	28,168
Marion	59	43	1	15	13,808
Morris	1	.....	....	1	.....
Ness	3	.....	....	3	.....
Norton	7	1	....	6	272
Osborne	1	.....	....	1	.....
Pawnee	23	17	....	6	31,013
Phillips	31	26	....	5	49,956
Pratt	43	23	9	11	21,336
Reno	43	31	....	12	69,315
Republic	1	.....	....	1	.....
Rice	205	153	4	48	194,954
Rooks	48	37	....	11	32,019
Rush	10	7	....	3	4,906
Russell	338	277	....	61	307,654
Saline	3	.....	....	3	.....
Scott	3	1	....	2	249
Sedgwick	11	4	....	7	1,092
Sherman	3	.....	1	2	.....
Stafford	153	109	1	43	209,144
Stevens	8	.....	8	.....	.....
Sumner	6	3	....	3	550
Thomas	2	.....	....	2	.....
Trego	3	1	....	2	30
Woodson	9	3	1	5	13
Total, 1941	2,091	1,432	72	587	1,767,963
Wells Drilled Deeper					
Barton	6	6	....	....	13,227
Butler	7	5	....	2	262
Cowley	1	1	....	....	425
Ellis	2	2	....	....	4,578
Ellsworth	3	3	....	....	3,301
Greenwood	4	4	....	....	350
Harvey	5	5	....	....	630
Jefferson	1	.....	....	1	.....
Johnson	1	.....	....	1	.....
Kingman	2	.....	2	....	.....
Kiowa	1	.....	....	1	.....
McPherson	1	1	....	....	38
Marion	1	1	....	....	5
Pawnee	1	1	....	....	1,427
Reno	1	.....	....	1	.....
Rice	7	4	....	3	993
Rooks	4	4	....	....	1,754
Russell	30	30	....	....	14,621
Sedgwick	2	2	....	....	369
Stafford	28	26	....	2	69,974
Total, 1941	108	95	2	11	111,954
Input Wells					
Greenwood	1	.....	....	....	.....
Rice	1	.....	....	....	.....
Total, 1941	2	.....	....	....	.....
Salt Water Disposal Wells					
Barton	4	.....	....	....	.....
Ellis	2	.....	....	....	.....
Ellsworth	1	.....	....	....	.....
Greenwood	1	.....	....	....	.....
Harvey	1	.....	....	....	.....
Reno	2	.....	....	....	.....
Rice	1	.....	....	....	.....
Russell	1	.....	....	....	.....
Scott	1	.....	....	....	.....
Sedgwick	1	.....	....	....	.....
Woodson	1	.....	....	....	.....
Total, 1941	16	.....	....	....	.....

Kentucky

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	317	133	7	177	5,942
Wells drilled deeper	12	8	....	4	505
Pressure input wells	6	.....	....	....	.....
Total, 1941	335	141	7	181	6,447
Total, 1940	367	168	8	191	10,519
New Wells Drilled for Oil or Gas					
Anderson	1	.....	....	1	.....
Ballard	1	.....	....	1	.....
Breckenridge	5	1	....	4	10
Butler	9	4	....	5	46
Caldwell	1	.....	....	1	.....
Christian	1	.....	....	1	.....
Daviess	95	49	3	43	2,682

(Continued in next column)

Kentucky—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Grayson	4	.....	....	4	.....
Hancock	29	15	1	13	157
Henderson	35	19	....	16	509
Logan	1	.....	....	1	.....
McCracken	1	.....	....	1	.....
McLean	30	11	1	18	1,447
Muhlenberg	9	1	1	7	5
Ohio	78	28	1	49	620
Union	12	4	....	8	461
Webster	5	1	....	4	5
Total, 1941	317	133	7	177	5,942
Wells Drilled Deeper					
Daviess	3	2	....	1	55
Hancock	1	.....	....	1	.....
McLean	6	4	....	2	418
Ohio	1	1	....	....	2
Webster	1	1	....	....	30
Total, 1941	12	8	....	4	505
Water Input Wells					
Daviess	5	.....	....	....	.....
Total, 1941	5	.....	....	....	.....
Gas Input Wells					
Ohio	1	.....	....	....	.....
Total Pressure Input Wells, 1941	6	.....	....	....	.....

Louisiana Summary

District	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
N. Louisiana:					
New wells drilled for Oil or Gas	700	429	78	193	46,530
Wells drilled deeper	2	.....	....	2	.....
S. Louisiana:					
New wells drilled for Oil or Gas	854	586	18	250	149,379
Wells drilled deeper	1	.....	....	1	.....
Total, 1941	1,557	1,015	96	446	195,909
Total, 1940	1,704	1,220	99	385	290,216

North Louisiana

Parish and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Bienville:					
Bisteneau	3	.....	3	....	.....
Lake Bisteneau	2	.....	1	1	.....
Bossier:					
Bellevue	30	21	1	8	400
Sligo	25	18	4	3	1,761
Caddo:					
Dixie	1	1	....	....	25
Greenwood	2	.....	....	2	.....
Olla	2	1	....	1	120
Pine Island	180	155	1	24	9,149
Shreveport	1	.....	....	1	.....
Vivian	7	5	....	2	292
Waskom	1	.....	....	1	.....
Wildcat	1	.....	....	1	.....
Caldwell:					
Wildcats	3	.....	1	2	.....
Catahoula:					
Wildcats	17	3	....	14	534
Claiborne:					
Athens	1	.....	....	1	.....
Haynesville	1	1	....	....	672
Homer	6	4	....	2	337
Lisbon	4	1	2	1	175
Sugar Creek	14	6	4	4	2,898
Wildcats	4	1	1	2	625
Concordia:					
Wildcats	3	.....	....	3	.....
De Soto:					
Bull Bayou-Naborton	4	.....	....	4	.....
Logansport-Joaquin	7	.....	7	....	.....

(Continued in next column)

North Louisiana—Continued

Parish and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Wildcat	1	1	....	....	5
Franklin:					
Wildcats	2	.....	....	2	.....
Grant:					
Urania	2	1	....	1	15
Wildcats	8	.....	....	8	.....
La Salle:					
Catahoula Lake	1	1	....	....	189
Cypress Bayou	1	.....	....	1	.....
Little Creek	50	40	3	7	5,375
Nebo-Jena	81	60	1	20	9,892
Olla	89	76	4	9	9,963
South Olla	7	4	....	3	295
Summerville	2	1	....	1	95
Trout Creek	4	2	1	1	335
Urania	8	5	....	3	263
Wildcats	15	3	1	11	580
Lincoln:					
Lisbon	1	.....	....	1	.....
Wildcat	1	.....	....	1	.....
Madison:					
Wildcats	2	.....	....	2	.....
Morehouse:					
Monroe	7	.....	7	....	.....
Wildcats	2	.....	....	2	.....
Natchitoches:					
Ajax	4	2	1	1	20
Wildcats	8	1	....	7	5
Ouachita:					
Monroe	6	1	5	....	33
Red River:					
Bull Bayou	2	.....	....	2	.....
Wildcats	3	1	....	2	6
Sabine:					
Converse	7	3	....	4	102
Pleasant Hill	3	1	....	2	12
Zwolle	6	1	....	5	95
Wildcats	2	.....	....	2	.....
Tensas:					
Wildcats	4	.....	....	4	.....
Union:					
Monroe	29	.....	29	....	.....
Oakland	1	.....	....	1	.....
Wildcats	2	.....	....	2	.....
Webster:					
Cartersville-Sarepta	1	1	....	....	25
Cotton Valley	8	7	....	1	2,237
Sibleyo-Dubberly	2	.....	1	1	.....
West Carroll:					
Wildcat	1	.....	....	1	.....
Winn:					
Wildcats	8	.....	....	8	.....
Total, 1941	700	429	78	193	46,530
Wells Drilled Deeper					
Claiborne:					
Lisbon	1	.....	....	1	.....
Union:					
Wildcat	1	.....	....	1	.....
Total, 1941	2	.....	....	2	.....

South Louisiana

Parish and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Acadia:					
Bayou Mallett	1	.....	....	1	.....
East Tepetate	2	1	....	1	69
Jennings	15	13	....	2	4,028
N. Crowley	10	9	....	1	2,137
Richie	14	7	....	7	682
S. Crowley	8	2	2	4	24
Wildcats	2	1	....	1	211
Allen:					
Wildcats	3	.....	....	3	.....
Ascension:					
Darrow Dome	8	2	....	6	257
Sorrento	1	.....	....	1	.....
Assumption:					
Darrow Dome	1	.....	....	1	.....
Wildcats	2	.....	....	2	.....
Avoyelles:					
Eola	6	5	....	1	1,249
Wildcats	3	.....	....	3	.....
Beauregard:					
Neale	3	3	....	....	932
Wildcats	2	.....	....	2	.....
Calcasieu:					
Edgerly	3	2	....	1	220
Gillis-English Bayou	6	6	....	....	1,073
Hayes	1	.....	....	1	.....
Iowa	7	6	....	1	2,396

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SEISMIC

SUBSURFACE SURVEYS

SEISMIC EXPLORATIONS, INCORPORATED • HOUSTON, TEXAS

South Louisiana—Continued

Parish and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Perkins	1	.....	....	1	.....
Starks	2	1	....	1	260
Sulphur	6	5	....	1	596
Vinton	5	5	....	....	739
Wildcats	4	.....	....	4	.....
Cameron:					
Black Bayou	4	3	....	1	817
Cameron Meadows	10	6	1	3	1,058
Chalkey	17	14	....	3	3,479
E. Hackberry	10	8	....	2	3,262
Grand Lake	1	1	....	....	133
Lakeside	3	3	....	....	186
Pecan Lake	2	2	....	....	42
Sweet Lake	4	3	....	1	367
W. Hackberry	11	10	....	1	4,000
Wildcats	3	1	....	2	85
E. Baton Rouge:					
University	6	3	1	2	414
Wildcat	1	.....	....	1	.....
Evangeline:					
Pine Prairie	12	11	....	1	4,200
Ville Platte	76	64	....	12	16,418
Wildcat	1	.....	....	1	.....
Iberia:					
Avery Island W.C.	1	.....	....	1	.....
Bayou Pigeon	5	2	....	3	893
Fausse Point	7	1	....	6	276
Jefferson Island	3	2	....	1	596
Little Bayou	9	7	....	2	1,952
New Iberia	3	2	....	1	451
Vermilion Bay	1	.....	....	1	.....
Wildcats	2	.....	....	2	.....
Iberville:					
Bayou Blue	24	17	1	6	2,538
Bayou Choctaw	3	2	....	1	319
Bayou des Glaise	1	.....	....	1	.....
Bayou Perot	1	1	....	....	481
St. Gabriel	20	18	....	2	4,478
White Castle	3	1	....	2	70
Wildcats	3	1	....	2	238
Jefferson:					
Barataria	16	11	....	5	3,172
La Fitte	9	9	....	....	3,852
Westwego	3	3	....	....	378
Wildcat	1	1	....	....	238
Jefferson Davis:					
Iowa	3	2	....	1	912
Mermentau	1	1	....	....	87
South China	1	.....	....	1	.....
S. Roanoke	2	1	....	1	.....
Welch	5	4	....	1	36
Woodlawn	11	7	....	4	374
La Fourche:					1,270
Bayou des Allemandes	2	2	....	....	417
Chacahoula	13	5	....	8	1,304
Delta Farms	1	1	....	....	470
Garden Island	1	1	....	....	194
Golden Meadow	57	50	....	7	9,746
La Fourche Crossing	2	2	....	....	99
Lake Long	4	3	1	....	1,215
Leeville	7	6	....	1	2,277
Raceland	5	2	....	3	360
Timbalier Bay	1	.....	....	1	.....
Valentine	3	2	....	1	169
Wildcats	2	.....	1	1	.....
Orleans:					
Unknown Pass	1	1	....	....	50
Plaquemines:					
Bastian Bay	2	1	....	1	324
Delacroix Island	2	1	1	....	335
Garden Island Bay	4	4	....	....	872
Grand Bay	11	11	....	....	4,176
Lake Hermitage	3	.....	1	2	.....
Octave Pass	2	2	....	....	652
Potash Dome	6	6	....	....	2,886
Quarantine Bay	12	12	....	....	5,428
Stella (Belle Chasse)	5	4	....	1	791
Venice Dome	8	7	....	1	1,951
West Bay	13	13	....	....	4,452
Wildcat	1	1	....	....	65
Rapides:					
Cheneyville	6	6	....	....	760
W. Alexandria	1	.....	....	1	.....
Wildcats	6	.....	....	6	.....
St. Bernard:					
Kenilworth	1	1	....	....	41
Wildcat	1	.....	....	1	.....
St. Charles:					
Bayou des Allemandes	1	1	....	....	308
Lake Salvador	8	8	....	....	3,994
Paradis	16	13	....	3	6,664
Wildcat	1	.....	....	1	.....
St. James:					
La Pice	3	1	....	2	256

(Continued in next column)

South Louisiana—Continued

Parish and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Vacherie (Convent)	1	.....	....	1	.....
St. Landry:					
Port Barre	11	10	....	1	2,085
Wildcats	2	.....	....	2	.....
St. Martin:					
Anse La Butte	60	37	1	22	7,351
Bayou Bouillon	6	.....	2	4	.....
Section 28 (Hager)	4	2	....	2	276
Happytown	1	.....	....	1	.....
Henderson (Plumb Bob)	2	1	....	1	161
Lake Chicot	1	1	....	....	160
Lake Mongoulois	2	.....	....	2	.....
West Lake Verrett	19	15	....	4	2,512
Wildcats	2	1	....	1	264
St. Mary:					
Bateman Lake	4	.....	3	1	.....
Bayou Sale	8	7	....	1	3,554
Belle Isle	6	1	....	5	68
Charenton	12	9	....	3	646
Horseshoe Bayou	2	1	....	1	97
Jeanerette	2	2	....	....	425
West Cote Blanche	4	4	....	....	1,029
Wildcats	6	.....	....	6	.....
St. Tammany:					
Wildcats	2	.....	....	2	.....
Terrebonne:					
Bay St. Elaine	6	4	....	2	749
Caillou Island	6	3	....	3	733
Coon Point	1	.....	....	1	.....
Dog Lake	6	3	....	3	716
Gibson	5	3	1	1	682
Lake Pelto	2	.....	....	2	.....
Lapyrouse	1	.....	1	....	.....
Pointe au Fer	1	.....	1	....	.....
Wildcats	7	.....	....	7	.....
Vermilion:					
Abbeville	4	2	....	2	95
East White Lake	4	3	....	1	1,000
Erath	8	7	....	1	1,450
Gueydan	8	7	....	1	1,744
S. Gueydan	3	1	....	2	256
Wildcat	1	.....	....	1	.....
West Baton Rouge:					
Bayou Choctaw	1	1	....	....	324
Port Allen	5	4	....	1	851
Wildcat	1	.....	....	1	.....
Total, 1941	854	586	18	250	149,379
Wells Drilled Deeper					
St. Mary:					
Wildcat	1	.....	....	1	.....
Total, 1941	1	.....	....	1	.....

Michigan

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	882	413	84	385	367,472
Wells drilled deeper	3	2	....	1	5,400
Total, 1941	885	415	84	386	372,872
Total, 1940	1,193	566	59	568	104,513
New Wells Drilled for Oil or Gas					
Allegan	156	68	....	88	6,706
Antrim	1	.....	....	1	.....
Arenac	39	24	3	12	14,221
Barry	2	.....	....	2	.....
Bay	34	31	....	3	3,148
Barrien	1	.....	....	1	.....
Branch	1	.....	....	1	.....
Calhoun	3	.....	....	3	.....
Cass	7	1	....	6	45
Clare	73	33	16	24	10,558
Eaton	1	.....	....	1	.....
Genessee	2	1	....	1	25
Gladwin	19	12	....	7	864
Gratiot	12	.....	2	10	.....
Huron	5	.....	....	5	.....
Ingham	1	.....	....	1	.....
Isabella	46	8	23	15	1,900

(Continued in next column)

Michigan—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Kalamazoo	2	.....	....	2	.....
Kalkaska	2	.....	....	2	.....
Kent	21	5	2	14	228
Lake	13	6	1	6	2,020
Lenawee	6	.....	....	6	.....
Livingstone	3	.....	....	3	.....
Macomb	1	.....	....	1	.....
Manistee	1	.....	....	1	.....
Mason	4	.....	1	3	.....
Mecosta	6	1	....	5	4
Midland	13	7	....	6	563
Missaukee	14	.....	5	9	.....
Monroe	9	4	....	5	117
Montcalm	26	2	5	19	150
Montmorency	2	.....	....	2	.....
Muskegon	8	1	....	7	5
Newaygo	1	.....	....	1	.....
Oceana	5	.....	....	5	.....
Osceola	144	101	25	18	294,570
Otsego	2	.....	....	2	.....
Ottawa	71	48	1	22	4,635
Roscommon	15	10	....	5	24,140
Saginaw	2	.....	....	2	.....
Sheboygan	1	.....	....	1	.....
Shiawassee	2	.....	....	2	.....
Tuscola	4	2	....	2	115
Van Buren	101	48	....	53	3,458
Total, 1941	882	413	84	385	367,472
Wells Drilled Deeper					
Bay	1	.....	....	1	.....
Osceola	2	2	....	....	5,400
Total, 1941	3	2	....	1	5,400

Mississippi

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	197	151	4	42	90,499
Salt water disposal wells	1	.....	....	....	.....
Total, 1941	198	151	4	42	90,499
Total, 1940	190	99	1	90	55,141
New Wells Drilled for Oil or Gas					
Attala:					
Wildcat	1	.....	....	1	.....
Bolivar:					
Wildcat	1	.....	....	1	.....
Clarke:					
Wildcat	1	.....	....	1	.....
Forrest:					
Wildcat	1	.....	....	1	.....
Hinds:					
Jackson	5	.....	4	1	.....
Wildcat	1	.....	....	1	.....
Lamar:					
Wildcat	1	.....	....	1	.....
Lauderdale:					
Wildcats	2	.....	....	2	.....
Lawrence:					
Wildcat	1	.....	....	1	.....
Leake:					
Wildcats	2	.....	....	2	.....
Madison:					
Wildcats	2	1	....	1	672
Marshall:					
Wildcat	1	.....	....	1	.....
Montgomery:					
Wildcats	2	.....	....	2	.....
Noxubee:					
Wildcat	1	.....	....	1	.....
Sharkey:					
Wildcats	2	1	....	1	75
Stone:					
Wildcats	3	.....	....	3	.....
Tishomingo:					
Wildcat	1	.....	....	1	.....
Warren:					
Wildcat	1	.....	....	1	.....
Yalabousha:					
Wildcat	1	.....	....	1	.....
Yazoo:					
Tinsley Dome	165	149	....	16	89,752
Wildcats	2	.....	....	2	.....
Total, 1941	197	151	4	42	90,499
Salt Water Disposal Wells					
Yazoo:					
Tinsley Dome	1	.....	....	....	.....
Total, 1941	1	.....	....	....	.....

Missouri

(Figures furnished by Missouri Geological Survey)

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Atchison	2	.....	....	2	.....
Bates	1	.....	....	1	.....
Buchanan	1	.....	....	1	.....
Caldwell	21	.....	9	12	.....
Cass	7	.....	....	7	.....
Clinton	3	.....	....	3	.....
DeKalb	4	.....	....	4	.....
Holt	3	.....	....	3	.....
Jackson	13	.....	4	9	.....
Knox	5	.....	....	5	.....
New Madrid	2	.....	....	2	.....
Pemiscot	2	.....	....	2	.....
Platte	15	.....	5	10	.....
Ray	3	.....	....	3	.....
St. Clair	1	.....	....	1	.....
Vernon	2	.....	....	2	.....
Total, 1941	85	.....	18	67	.....
Total, 1940	94	5	30	59	48

Montana

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Big Horn:					
Hardin	2	.....	2	....	.....
Soap Creek	1	.....	....	1	.....
Blaine:					
Bowes	8	.....	5	3	.....
Carbon:					
Frannie	1	1	....	....	33
Cascade:					
Vaughn	1	.....	....	1	.....
Fallon:					
Cedar Creek	14	.....	12	2	.....
Fergus:					
Winnifred	1	.....	1	....	.....
Garfield:					
Mosby Dome	1	.....	....	1	.....
Glacier:					
Cut Bank	110	99	2	9	18,078
Tribal	2	2	....	....	256
Twin Rivers	1	.....	1	....	.....
Hill:					
Box Elder	4	.....	3	1	.....
Signal Butte	1	.....	....	1	.....
Liberty:					
Haystack	1	.....	1	....	.....
Whitlash	3	.....	1	2	.....
Phillips:					
Bowdoin	20	.....	18	2	.....
Teton:					
Pendroy	1	.....	....	1	.....
Toole:					
Aloe Nose	1	.....	....	1	.....
Davon	5	.....	3	2	.....
Kevin-Sunburst	68	37	8	23	2,450
Valley:					
Bowdoin	4	.....	4	....	.....
Total, 1941	250	139	61	50	20,817
Total, 1940	192	140	26	26	15,368

Nebraska

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	81	39	....	42	14,050
Wells drilled deeper	12	10	....	2	2,887
Total, 1941	93	49	....	44	16,937
Total, 1940	53	23	....	30	14,032
New Wells Drilled for Oil or Gas					
Cass	2	.....	....	2	.....
Dakota	1	.....	....	1	.....
Fillmore	1	.....	....	1	.....
Gage	1	.....	....	1	.....
Lancaster	1	.....	....	1	.....
Lincoln	1	.....	....	1	.....
Nemaha	9	.....	....	9	.....
Otoe	2	.....	....	2	.....
Richardson	63	39	....	24	14,050
Total, 1941	81	39	....	42	14,050

(Continued in next column)

Nebraska—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Wells Drilled Deeper					
Richardson	12	10	....	2	2,887
Total, 1941	12	10	....	2	2,887

New Mexico

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	393	297	15	81	65,491
Wells drilled deeper	4	2	....	2	520
Total, 1941	397	299	15	83	66,011
Total, 1940	623	487	18	118	178,293
New Wells Drilled for Oil or Gas					
Chaves:					
Wildcats	5	.....	....	5	.....
DeBaca:					
Wildcat	1	.....	....	1	.....
Donna Ana:					
Wildcat	1	.....	....	1	.....
Eddy:					
Unclassified	165	139	2	24	17,548
Wildcats	23	2	1	20	392
Harding:					
Wildcat	1	.....	....	1	.....
Lea:					
Arrowhead	9	9	....	....	4,135
Cooper	2	2	....	....	265
Corbin	1	.....	1	....	.....
Eaves	5	3	1	1	4,483
Eunice	2	2	....	....	814
Halfway	4	3	....	1	975
Hardy (North Eunice)	1	1	....	....	70
Hobbs	1	1	....	....	360
Jal	1	1	....	....	48
Langlie	1	.....	1	....	.....
Lovington	6	6	....	....	834
Lynn	2	.....	1	1	.....
Maljamar	69	63	....	6	22,771
Mattix	11	11	....	....	1,486
Monument	6	6	....	....	1,140
Penrose (S. Eunice)	7	6	....	1	558
Rhoades	8	7	1	....	993
Salt Lake	2	2	....	....	211
Skelly	6	6	....	....	525
Vacuum	13	13	....	....	3,631
W. Eunice	9	6	....	3	2,492
Wildcats	12	2	....	10	1,226
McKinley:					
Miscellaneous	6	5	....	1	289
San Juan:					
Miscellaneous	9	1	5	3	245
Wildcat	1	.....	....	1	.....
Socorro:					
Wildcat	1	.....	....	1	.....
Torrance:					
Wildcats	2	.....	2	....	.....
Total, 1941	393	297	15	81	65,491
Wells Drilled Deeper					
Chaves	1	.....	....	1	.....
Eddy:					
Wildcat	1	.....	....	1	.....
Lea:					
Cooper	1	1	....	....	5
Monument	1	1	....	....	515
Total, 1941	4	2	....	2	520

New York

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	678	674	3	1	4,839
Water input wells	441	.....	....	....	.....
Total, 1941	1,119	674	3	1	4,839
Total, 1940	957	939*	9	9	3,368

* Including 406 Allegany water input wells.

(Continued in next column)

New York—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Allegany	678	674	3	1	4,839
Total, 1941	678	674	3	1	4,839
Water Input Wells					
Allegany	441	.....	....	....	.....
Total, 1941	441	.....	....	....	.....

Ohio

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	1,648	421	770	457	10,994
Wells drilled deeper	18	1	15	2	1
Gas input wells	51	.....	....	....	.....
Water input wells	57	.....	....	....	.....
Total, 1941	1,774	422	785	459	10,995
Total, 1940	1,132	429	412	291	4,733
New Wells Drilled for Oil or Gas					
Allen	2	2	....	....	13
Ashland	61	11	19	31	117
Ashtabula	3	.....	1	2	.....
Athens	141	25	74	42	95
Auglaize	1	.....	....	1	.....
Belmont	9	1	3	5	7
Carroll	1	.....	1	....	.....
Columbiana	1	1	....	....	2
Coshocton	31	11	12	8	539
Cuyahoga	27	2	19	6	12
Fairfield	14	.....	12	2	.....
Gallia	9	.....	9	....	.....
Geauga	1	.....	....	1	.....
Guernsey	28	1	14	13	2
Hancock	1	1	....	....	4
Hardin	1	1	....	....	5
Harrison	8	.....	3	5	.....
Hocking	20	2	11	7	26
Holmes	24	1	14	9	1
Jackson	2	.....	1	1	.....
Jefferson	12	6	1	5	28
Knox	89	11	53	25	298
Lake	2	.....	....	2	.....
Lawrence	22	.....	20	2	.....
Licking	190	32	123	35	451
Lorain	37	2	14	21	5
Medina	194	132	20	42	1,046
Meigs	91	4	64	23	66
Mahoning	1	.....	1	....	.....
Mercer	1	1	....	....	1
Monroe	66	17	34	15	84
Morgan	47	3	25	19	7
Muskingum	70	7	48	15	227
Noble	91	30	31	30	94
Perry	106	67	16	23	7,678
Portage	1	.....	1	....	.....
Putnam	2	2	....	....	9
Richland	3	.....	1	2	.....
Seneca	3	.....	1	2	.....
Stark	21	.....	17	4	.....
Summit	9	3	4	2	12
Tuscarawas	31	.....	27	4	.....
Van Wert	2	.....	1	1	.....
Vinton	8	.....	3	5	.....
Washington	126	44	50	32	160
Wayne	31	.....	22	9	.....
Wood	2	1	....	1	5
Wyandot	5	.....	.....	5	.....
Total, 1941	1,648	421	770	457	10,994
Wells Drilled Deeper					
Athens	6	.....	6	....	.....
Meigs	2	.....	2	....	.....
Monroe	4	1	3	....	1
Washington	6	.....	4	2	.....
Total, 1941	18	1	15	2	1
Gas Input Wells					
Medina	48	.....	....	....	.....
Monroe	2	.....	....	....	.....
Washington	1	.....	....	....	.....
Total, 1941	51	.....	....	....	.....
Water Input Wells					
Medina	57	.....	....	....	.....
Total, 1941	57	.....	....	....	.....

Oklahoma

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	1,930	1,169	154	607	359,101
Wells drilled deeper	200	159	7	34	35,649
Gas input wells	19	.....	.....	.....	.....
Water input wells	3	.....	.....	.....	.....
Salt water disposal wells	10	.....	.....	.....	.....
Total, 1941	2,162	1,328	161	641	394,750
Total, 1940	2,147*	1,225	182	740	304,356

* Includes approximately 400 old wells deepened or plugged back.

New Wells Drilled for Oil or Gas					
Atoka	2	.....	.....	2	.....
Beckham	1	.....	.....	1	.....
Bryan	16	15	.....	1	13,195
Caddo	68	54	5	9	54,906
Carter	168	143	2	23	42,621
Choctaw	1	.....	.....	1	.....
Cleveland	3	1	.....	2	215
Coal	4	.....	3	1	.....
Comanche	20	4	.....	16	74
Cotton	2	1	.....	1	15
Creek	186	122	16	48	10,610
Garfield	2	1	.....	1	45
Garvin	22	12	.....	10	963
Grady	24	9	8	7	336
Grant	2	1	.....	1	556
Hughes	27	6	5	16	1,763
Jackson	37	20	1	16	1,290
Jefferson	18	3	.....	15	118
Johnson	1	.....	.....	1	.....
Kay	12	6	.....	6	647
Kiowa	47	23	3	21	8,782
Latimer	10	.....	8	2	.....
La Flore	4	.....	4	.....	.....
Lincoln	55	22	10	23	1,599
Logan	48	28	4	16	15,960
Love	5	1	.....	4	20
McClain	2	1	.....	1	278
McIntosh	8	.....	6	2	.....
Marshall	24	22	.....	2	20,737
Murray	1	.....	.....	1	.....
Muskogee	27	6	7	14	280
Noble	12	2	2	8	322
Okfuskee	200	134	14	52	57,483
Oklahoma	41	39	.....	2	12,018
Okmulgee	94	38	15	41	852
Osage	109	83	4	22	7,377
Pawnee	26	8	6	12	614
Payne	25	13	1	11	18,518
Pittsburgh	6	.....	4	2	.....
Pontotoc	54	22	8	24	458
Pottawatomie	220	167	3	50	54,289
Seminole	160	94	8	58	13,819
Stephens	81	46	5	30	2,060
Tillman	17	11	.....	6	16,101
Tulsa	26	10	1	15	168
Wagoner	11	1	1	9	12
Woods	1	.....	.....	1	.....
Total, 1941	1,930	1,169	154	607	359,101
Wells Drilled Deeper					
Caddo	8	7	.....	1	2,527
Carter	31	28	.....	3	18,856
Cleveland	3	3	.....	.....	268
Creek	9	5	.....	4	145
Garfield	1	1	.....	.....	20
Grady	2	2	.....	.....	60
Hughes	3	2	.....	1	64
Jackson	16	13	1	2	211
Kay	1	1	.....	.....	63
Kiowa	3	2	.....	1	600
Latimer	1	.....	.....	1	.....
Logan	1	1	.....	.....	677
McClain	1	.....	.....	1	.....
Marshall	1	1	.....	.....	742
Muskogee	2	.....	1	1	.....
Okfuskee	15	9	3	3	1,336
Oklahoma	14	14	.....	.....	4,893
Okmulgee	5	2	.....	3	13
Osage	11	9	1	1	1,627
Pawnee	4	4	.....	.....	97
Payne	1	.....	.....	1	.....
Pontotoc	6	4	.....	2	98
Pottawatomie	22	17	.....	5	996
Seminole	18	17	1	.....	1,277
Stephens	20	17	.....	3	1,079
Wagoner	1	.....	.....	1	.....
Total, 1941	200	159	7	34	35,649

(Continued in next column)

Oklahoma—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Gas Input Wells					
Creek	6	.....	.....	.....	.....
Okmulgee	6	.....	.....	.....	.....
Osage	4	.....	.....	.....	.....
Pontotoc	1	.....	.....	.....	.....
Tulsa	2	.....	.....	.....	.....
Total, 1941	19	.....	.....	.....	.....
Water Input Wells					
Osage	2	.....	.....	.....	.....
Pawnee	1	.....	.....	.....	.....
Total, 1941	3	.....	.....	.....	.....
Salt Water Disposal Wells					
Kay	1	.....	.....	.....	.....
Noble	2	.....	.....	.....	.....
Okfuskee	1	.....	.....	.....	.....
Osage	3	.....	.....	.....	.....
Pawnee	3	.....	.....	.....	.....
Total, 1941	10	.....	.....	.....	.....

Pennsylvania

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	2,253	1,722	409	122	2,370
Wells drilled deeper	16	.....	.....	.....	.....
Water input wells	1,675	.....	.....	.....	.....
Total, 1941	3,944	1,722	409	122	2,370
Total, 1940	3,690	3,264*	281	145	4,984

* Including 1,562 water intake wells in Bradford District, and 20 in Middle District, all included with oil wells.

New Wells Drilled for Oil or Gas					
Allegheny	8	1	5	2	5
Armstrong	96	.....	88	8	.....
Bradford Dist.	1,540	1,540	.....	.....	1,889
Butler-Armstrong	66	33	16	17	60
Butler	3	1	1	1	5
Clarion	45	.....	43	2	.....
Fayette	55	.....	42	13	.....
Greene	73	5	58	10	137
Indiana	27	.....	13	14	.....
Jefferson	13	.....	12	1	.....
Middle District	196	137	39	20	195
New York-Penn Gas	56	.....	31	25	.....
Washington	52	5	40	7	79
Westmoreland	23	.....	21	2	.....
Total, 1941	2,253	1,722	409	122	2,370
Wells Drilled Deeper					
Armstrong	3	.....	3	.....	.....
Fayette	1	.....	1	.....	.....
Greene	7	.....	5	2	.....
Washington	4	.....	4	.....	.....
Westmoreland	1	.....	1	.....	.....
Total, 1941	16	.....	14	2	.....
Water Input Wells					
Bradford Dist.	1,667	.....	.....	.....	.....
Middle Dist.	8	.....	.....	.....	.....
Total, 1941	1,675	.....	.....	.....	.....

South Dakota

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Total, 1941	.....	.....	.....	.....	.....
Total, 1940	1	.....	.....	1	.....

Tennessee

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Total, 1941	23	.....	5	18	.....
Total, 1940	27	3	.....	24	332

Texas Summary

(Note: Given below, along with details by counties and fields, are summaries for individual districts of state, showing for each district the number of wells drilled deeper, salt water disposal wells, water input wells, and gas input wells, in addition to new wells drilled for oil or gas.)

Kind of Completion and District	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Eastern Texas	1,106	873	48	185	1,008,613
North Texas	2,406	1,565	12	829	498,294
South Texas	2,377	1,569	97	711	573,062
Gulf Coast	742	548	25	169	126,194
Panhandle	707	636	45	26	138,217
West Texas	2,312	2,110	11	191	1,770,034
West Central	641	274	37	330	38,329
Total	10,291	7,575	275	2,441	4,152,743
Wells Drilled Deeper					
Eastern Texas	4	.....	.....	4	.....
North Texas	43	22	1	20	7,683
South Texas	24	10	5	9	3,161
Panhandle	1	1	.....	.....	123
West Texas	52	42	1	9	12,080
West Central	3	2	.....	1	205
Total	127	77	7	43	23,252
Water Input Wells					
North Texas	1	.....	.....	.....	.....
Gas Input Wells					
North Texas	12	.....	.....	.....	.....
West Central	1	.....	.....	.....	.....
Total	13	.....	.....	.....	.....
Salt Water Disposal Wells					
Eastern Texas	6	.....	.....	.....	.....
West Texas	1	.....	.....	.....	.....
Total	7	.....	.....	.....	.....
All Wells					
State Total, 1941	10,439	7,652	282	2,484	4,175,995
State Total, 1940	9,775	7,107	291	2,377	4,045,397

Eastern Texas Summary

District	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
East Texas Field	508	490	....	18	877,317
East Texas Border Co.'s	33	7	11	15	584
Rest of E. Texas	565	376	37	152	130,712
Total	1,106	873	48	185	1,008,613
Wells Drilled Deeper					
Eastern Texas Outside East Texas Field and Border Counties	4	.....	.....	4	.....
Salt Water Disposal Wells					
E. Texas Field	5	.....	.....	.....	.....
Sulphur Bluff Field	1	.....	.....	.....	.....
Total	6	.....	.....	.....	.....
Total, all wells, E. Texas, 1941	1,116	873	48	189	1,008,613
Total, all Wells, 1940	615	437	51	127	610,637

WHERE SAFETY COUNTS— USE SPANG CABLE TOOLS

When drilling in a well, the investment has been made. When cleaning out the well, the investment has been proven. In either case, the risk of loss is at its peak, and it is wisdom to minimize it. Spang Cable Tools offer you the greatest safety factor.

THE PETROLEUM INDUSTRY'S *"Seal of Approval"*

There's an *invisible* stamp on every Spang Cable Tool . . . an unwritten "Seal of Approval" . . . placed there by the Oil and Gas Industry. The world over, Spang Tools have become the recognized *standard of comparison* for cable-tool reliability. Whenever you use cable tools, let the Spang trademark be your guide to satisfaction. Today, as fifty years ago, Spang Cable Tools are "Higher Standard" Tools. Spang & Co., Butler, Pa.

THE BIGGEST NAME IN SPANG CABLE TOOLS

East Texas Field

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	508	490	....	18	877,317
Salt Water Disposal wells	5	.....	....	....	.....
Total, 1941	513	490	....	18	877,317
Total, 1940	323	308	....	15	580,960
New Wells Drilled for Oil or Gas					
Joiner Area	64	63	....	1	61,076
Kilgore Area	241	233	....	8	306,090
Longview Area	203	194	....	9	510,151
Total, 1941	508	490	....	18	877,317
Salt Water Disposal Wells					
Joiner Area	2	.....	....	....	.....
Kilgore Area	2	.....	....	....	.....
Longview Area	1	.....	....	....	.....
Total, 1941	5	.....	....	....	.....

East Texas Border Counties

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Cass:					
Wildcats	2	.....	....	2	.....
Harrison:					
Waskom	2	.....	2	....	.....
Wildcat	1	.....	....	1	.....
Marion:					
Jefferson-Rodessa	3	1	....	2	312
Pine Island-Smithland	10	5	....	5	222
Wildcat	1	.....	....	1	.....
Panola:					
Bethany	2	.....	2	....	.....
Carthage	2	.....	2	....	.....
Wildcat	1	.....	....	1	.....
Shelby:					
Joaquin	2	.....	2	....	.....
Joaquin-Logansport	3	.....	3	....	.....
Wildcats	4	1	....	3	50
Total, 1941	33	7	11	15	584
Total, 1940	27	4	10	13	346

Rest of Eastern Texas

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	565	376	37	152	130,712
Wells drilled deeper	4	.....	....	4	.....
Salt water disposal wells	1	.....	....	....	.....
Total, 1941	570	376	37	156	130,712
Total, 1940	265	125	41	99	29,331
Anderson:					
Camp Hill	1	.....	....	1	.....
Cayuga	15	11	4	....	1,643
Long Lake	45	36	6	3	3,829
Wildcats	7	.....	....	7	.....
Angelina:					
Miscellaneous	1	1	....	....	1
Wildcats	2	.....	....	2	.....
Bowie:					
Wildcats	2	.....	....	2	.....
Camp:					
Pittsburgh	1	1	....	....	71
Cherokee:					
Wildcats	5	.....	....	5	.....
Delta:					
Wildcats	2	.....	....	2	.....
Ellis:					
Wildcats	1	.....	....	1	.....

(Continued in next column)

Rest of Eastern Texas—Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Falls:					
Miscellaneous	2	.....	....	2	.....
Wildcats	2	.....	....	2	.....
Fannin:					
Wildcat	1	.....	....	1	.....
Franklin:					
Talco	40	37	....	3	17,406
Wildcat	1	.....	....	1	.....
Freestone:					
Cayuga	6	4	1	1	468
Cayuga Deep	1	.....	1	....	.....
Long Lake	1	.....	....	1	.....
Wortham	18	17	....	1	1,021
Wildcats	3	.....	....	3	.....
Gregg:					
Willow Springs	5	1	3	1	60
Wildcat	1	.....	....	1	.....
Henderson:					
Flag Lake	1	.....	....	1	.....
Opalika	6	.....	5	1	.....
Wildcats	3	1	....	2	355
Hill:					
Wildcat	1	.....	....	1	.....
Houston:					
Grapeland	11	.....	11	....	.....
Navarro Crossing	2	1	....	1	55
Wildcats	4	.....	....	4	.....
Hunt:					
Wildcat	1	.....	....	1	.....
Kaufman:					
Wildcat	1	.....	....	1	.....
Lamar:					
Wildcats	2	.....	....	2	.....
Leon:					
Wildcats	2	.....	....	2	.....
Limestone:					
Barron	3	1	2	....	22
Mexia	2	2	....	....	27
Tehuacana	4	.....	1	3	.....
Wortham	2	1	....	1	10
Wildcats	4	.....	....	4	.....
McLannan:					
Wildcats	5	.....	....	5	.....
Madison:					
Wildcats	2	.....	....	2	.....
Morris:					
Wildcat	1	.....	....	1	.....
Navarro:					
Corsicana Powell	4	1	....	3	9
Flag Lake	2	.....	....	2	.....
Powell	2	.....	....	2	.....
Richland	6	4	....	2	94
Miscellaneous	1	.....	....	1	.....
Wildcats	5	.....	....	5	.....
Rains:					
Wildcats	2	.....	....	2	.....
Red River:					
Wildcats	3	.....	....	3	.....
Robertson:					
Wildcat	1	.....	....	1	.....
Rockwell:					
Wildcat	1	.....	....	1	.....
Rusk:					
New Salem	7	2	....	5	536
Pleasant Grove-Salem	1	1	....	....	367
Wildcats	6	1	....	5	215
Smith:					
Chapel Hill	14	14	....	....	4,719
Wildcats	9	.....	....	9	.....
Titus:					
Talco	9	6	....	3	2,171
Trinity:					
Wildcats	2	.....	....	2	.....
Upshur:					
Wildcats	8	.....	....	8	.....
Van Zandt:					
Van	6	5	....	1	3,666
Wildcats	5	.....	....	5	.....
Wood:					
Hawkins	236	227	3	6	93,842
Wildcats	15	1	....	14	125
Total, 1941	565	376	37	152	130,712
Wells Drilled Deeper					
Hopkins:					
Wildcat	1	.....	....	1	.....
Rusk:					
Wildcat	1	.....	....	1	.....
Upshur:					
Wildcat	1	.....	....	1	.....
Wood:					
Wildcat	1	.....	....	1	.....
Total, 1941	4	.....	....	4	.....
Salt Water Disposal Wells					
Hopkins:					
Sulphur Bluff	1	.....	....	....	.....
Total, 1941	1	.....	....	....	.....

North Texas

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	2,406	1,565	12	829	498,294
Wells drilled deeper	43	22	1	20	7,683
Gas input wells	12	.....	....	....	.....
Water input wells	1	.....	....	....	.....
Total, 1941	2,462	1,587	13	849	505,977
Total, 1940	2,154	1,468	14	672	749,031
New Wells Drilled for Oil or Gas					
Archer:					
Griffin-Kadane	17	14	....	3	10,155
Hull-Silk Deep	19	17	....	2	19,271
Hull-Silk	60	56	....	4	32,084
K-M-A	7	6	....	1	3,552
McCrary	1	.....	....	1	.....
Mankins	4	2	....	2	1,470
Scotland	14	13	....	1	17,187
Shell-Coleman	2	2	....	....	2,005
Vogtsberger	3	1	....	2	29
Miscellaneous	190	121	....	69	6,258
Wildcats	68	6	....	62	139
Baylor:					
Cowan	2	1	....	1	104
Mabelle	10	9	....	1	2,573
Rendham	10	10	....	....	1,401
Seymour	3	1	....	2	236
Turbeville	4	4	....	....	335
Wildcats	8	1	....	7	58
Clay:					
Antelope	32	32	....	....	22,757
Burns-Browning	2	2	....	....	505
Halsell	2	1	....	1	294
Hapgood	2	1	....	1	336
New York City	3	3	....	....	5,669
Ringgold	2	1	....	1	150
Ross-Jolly	8	6	....	2	3,980
Scotland	2	2	....	....	1,095
Shell-Coleman	1	1	....	....	10,224
Shell-Henderson	1	1	....	....	1,692
Worsham Deep	1	1	....	....	197
Miscellaneous	290	186	....	104	10,505
Wildcats	43	5	....	38	2,389
Cooke:					
Bindel	3	2	....	1	763
Walnut Bend	42	39	....	3	12,308
Miscellaneous	155	131	1	23	9,541
Wildcats	24	1	....	23	72
Denton:					
Miscellaneous	1	.....	....	1	.....
Wildcats	6	.....	1	5	.....
Foard:					
Allee	2	.....	....	2	.....
Wildcat	1	.....	....	1	.....
Grayson:					
Wildcats	3	.....	....	3	.....
Haskell:					
Miscellaneous & Wildcats	2	.....	1	1	.....
Jack:					
Miscellaneous	91	63	....	28	18,967
Wildcats	21	7	1	13	2,247
King:					
Wildcat	1	.....	....	1	.....
Knox:					
Wildcats	2	.....	....	2	.....
Montague:					
Benton	4	4	....	....	2,164
Benton-Holmes	19	16	....	3	4,549
Bonita	7	4	....	3	10,984
Clingingsmith	3	3	....	....	7,463
Hults-Owens	4	2	....	2	2,409
Nocona	2	2	....	....	2,056
Nocona-Rogers	2	2	....	....	1,016
Ringgold	3	2	....	1	341
Rogers & Rogers	6	5	....	1	3,604
Miscellaneous	49	39	1	9	1,037
Wildcats	17	6	....	11	3,217
Tarrant:					
Wildcat	1	.....	....	1	.....

(Continued on page 118)

UNIT RIG'S

AIR-O-MATIC Clutches

PATENTED

made MOTORIG'S

Super Performance possible

The AIR-O-MATIC clutch, a UNIT RIG development, is now used not only in the MOTORIG and MOTOHOIST, but in the standard U 10 Spitfire and other drilling rigs and well-servicing hoists. The AIR-O-MATIC clutch is not only used as a hoisting and rotary clutch on the MOTORIG and MOTOHOIST, but is also used as the power input clutch from the drill rig and hoist engines to drive the truck — eliminating a truck engine. This results in unbelievable road and hoisting performance.

Safe as a locomotive air bra

AIR-O-MATIC CLUTCH

Mechanical Features

- Only one actuating part.
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- Equalized Pressure on All Driving Parts.
- Torque Controlled—Definitely. (This is important for Rotary Drive).
- Self Compensating for wear of friction elements.
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Operation Features

- Finger Tip Control.
- Cushion Engagement.
- Powerful.
- Flexible.
- Durable and Safe.

UNIT RIG & EQUIPMENT CO.
TULSA OKLAHOMA U.S.A.

North Texas—Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Throckmorton:					
Miscellaneous	74	53	2	19	1,118
Wildcats	9	1	....	8	1,238
Wichita:					
Asylum	1	.....	....	1	.....
K-M-A	130	122	....	8	56,996
K-M-A Ellenburger	106	104	....	2	121,697
South Electra Deep	1	1	....	....	860
Miscellaneous	248	154	....	94	5,327
Wildcats	24	2	....	22	14
Wilbarger:					
Consolidated	7	4	....	3	1,274
Fargo	44	40	....	4	22,005
Harrold	5	4	....	1	857
Rock Crossing Ellenberger	1	1	....	....	849
Miscellaneous	57	46	....	11	2,875
Wildcats	11	1	....	10	140
Wise:					
Wildcats	2	.....	....	2	.....
Young:					
Miscellaneous	337	188	5	144	38,871
Wildcats	67	10	....	57	4,785
Total, 1941	2,406	1,565	12	829	498,294
Total, 1940	2,154	1,468	14	672	749,031
Wells Drilled Deeper					
Archer:					
Wildcat	1	.....	....	1	.....
Baylor:					
Wildcat	1	.....	....	1	.....
Clay:					
Wildcats	2	1	....	1	608
Cooke:					
Wildcats	3	1	....	2	4
Foard:					
Johnson Ranch	1	.....	1	....	.....
Jack:					
Miscellaneous	3	1	....	2	13
Montague:					
Hott	1	1	....	....	250
Montague	8	5	....	3	1,343
Wichita:					
K-M-A	2	1	....	1	400
K-M-A Ellenberger	4	1	....	3	31
Miscellaneous	5	4	....	1	28
Wilbarger:					
Consolidated	2	2	....	....	1,677
Electra	3	1	....	2	167
Miscellaneous	1	.....	....	1	.....
Young:					
Miscellaneous	6	4	....	2	2,962
Total, 1941	43	22	1	20	7,683
Gas Input Wells					
Clay County	1	.....	....	....	.....
Cooke County	4	.....	....	....	.....
Wichita County	1	.....	....	....	.....
Young County	6	.....	....	....	.....
Total, 1941	12	.....	....	....	.....
Water Input Wells					
Young County	1	.....	....	....	.....
Total, 1941	1	.....	....	....	.....

South Texas Summary

District	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Corpus Area	1,292	972	47	273	445,880
San Antonio Area	286	153	4	129	15,887
Laredo Area	799	444	46	309	111,295
Total	2,377	1,569	97	711	573,062
Wells Drilled Deeper					
Corpus Area	12	9	....	3	3,085
San Antonio Area	3	.....	.....	3	.....
Laredo Area	9	1	5	3	76
Total	24	10	5	9	3,161
All Wells Total, 1941	2,401	1,579	102	720	576,223
Total, 1940	2,559	1,624	77	858	636,051

South Texas: Corpus Christi Area

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	1,292	972	47	273	445,880
Wells drilled deeper	12	9	....	3	3,085
Total, 1941	1,304	981	47	276	448,965
Total, 1940	1,263	914	35	314	496,158
New Wells Drilled for Oil or Gas					
Aransas:					
McCampbell	6	4	....	2	1,247
St. Charles	1	1	....	....	90
Wildcats	2	.....	....	2	.....
Bee:					
Genevieve	1	.....	....	1	.....
Heard	1	1	....	....	35
Pettus	1	1	....	....	99
W. Tuleta	2	1	....	1	100
Wildcats	16	1	....	15	150
Brooks:					
Alta Mesa	14	14	....	....	1,620
Kelsey	20	19	....	1	8,782
La Gloria	4	4	....	....	1,450
Palo Blanco	1	.....	....	1	.....
Wildcats	4	1	1	2	300
Calhoun:					
Coloma Creek	2	1	....	1	450
Duck Bay	5	2	....	3	750
Wildcats	7	1	1	5	65
Cameron:					
Wildcat	1	.....	....	1	.....
Colorado:					
Garwood	7	4	....	3	2,950
Sheridan	1	1	....	....	350
Wildcat	1	1	....	....	150
De Witt:					
Wildcat	1	.....	....	1	.....
Fayette:					
Wildcats	2	.....	....	2	.....
Goliad:					
Hords Creek	2	.....	1	1	.....
La Bahia	1	.....	....	1	.....
Weser	5	2	....	3	133
Wildcats	3	.....	....	3	.....
Hidalgo:					
McAllen	1	1	....	....	100
Nichols	14	11	....	3	4,991
Samfordyce	3	3	....	....	1,000
Samfordyce (Sullivan City)	2	2	....	....	450
Wildcats	4	.....	....	4	.....
Jackson:					
Cordele	4	3	....	1	1,150
Francitas	6	5	....	1	1,000
Ganado	8	7	....	1	3,625
La Ward	22	20	1	1	13,500
Lolita	117	116	....	1	64,080
Maubro	10	10	....	....	5,200
Navidad	1	.....	1	....	.....
N. La Ward	12	11	....	1	4,775
Texana	2	1	....	1	300
W. Ganado	24	24	....	....	9,408
West Ranch	148	138	5	5	88,090
Wildcats	22	3	....	19	1,900
Jim Wells:					
Alfred-West	4	2	1	1	1,000
E. Alice	6	4	1	1	1,525
Bentonville-King	1	1	....	....	300
Ben Bolt	15	13	....	2	7,365
Clark-Muile	1	.....	....	1	.....
E. Premont	15	15	....	....	7,040
Haldeman	1	.....	....	1	.....
La Gloria	9	6	1	2	2,100
Orange Grove	15	12	....	3	4,600
Premont	4	3	....	1	193
Sandia	4	2	1	1	550
Seeligson	5	5	....	....	2,023
Stratton	1	1	....	....	300
Wade City	28	23	....	5	7,744
Miscellaneous	1	1	....	....	500
Wildcats	20	3	....	17	1,000
Karnes:					
Wildcats	4	1	....	3	500
Kenedy:					
Baffina Bay	1	.....	....	1	.....
Wildcat	1	.....	....	1	.....
Kleberg:					
Stratton	6	6	....	....	2,575
Lavaca:					
Wildcats	4	2	....	2	750
Live Oak:					
Ezzell	3	2	....	1	40
Oakville	8	4	....	4	440
S. White Creek	4	2	....	2	185
White Creek	17	8	....	9	609
Wildcats	24	2	....	22	906
Nueces:					
Agua Dulce	85	70	7	8	36,498

(Continued in next column)

South Texas: Corpus Christi Area Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Banquette	1	1	....	....	500
Bentonville-King	30	30	....	....	9,472
Chapman	2	1	1	....	90
Clara Driscoll	12	7	3	2	2,225
E. Flour Bluff	15	10	1	4	4,490
E. White Point	6	6	....	....	2,800
Luby	5	4	....	1	1,600
Minnie Bock	34	31	....	3	4,498
N. Agua Dulce	5	4	....	1	1,550
N. Luby	2	2	....	....	900
Riverside	1	1	....	....	75
Robstown	3	1	....	2	47
Saxet	2	2	....	....	300
Shield	9	7	2	....	3,150
S. Clara Driscoll	35	27	2	6	8,201
Stratton	67	63	1	3	28,625
Turkey Creek	1	.....	....	1	.....
Wildcats	21	4	....	17	1,425
Refugio:					
Fagan	1	1	....	....	350
Greta	1	1	....	....	300
La Rosa	4	.....	....	4	.....
McFaddin	14	12	1	1	4,900
Refugio	15	12	....	3	3,317
S. McFaddin	5	5	....	....	2,200
Tomoconnor	18	18	....	....	25,000
Woodsboro	5	3	....	2	825
Wildcats	7	2	....	5	585
San Patricio:					
E. Mathis	1	.....	....	1	.....
E. Plymouth	1	.....	....	1	.....
E. White Point	8	7	....	1	3,450
Midway	38	31	1	6	9,728
Odem	15	14	....	1	6,325
Plymouth	5	5	....	....	2,650
White Point	1	.....	....	1	.....
Wildcats	12	.....	....	12	.....
Victoria:					
Coletto Creek	17	15	1	1	2,910
Cologne	10	5	3	2	2,050
E. Placedo	2	2	....	....	624
E. Telferner	2	.....	1	1	.....
Heyser	13	11	2	....	5,700
N. Keeran	4	2	1	1	800
McFaddin	3	2	1	....	980
N. McFaddin	8	4	4	....	925
Placedo	5	5	....	....	1,583
Telferner	1	.....	....	1	.....
Victoria	12	9	1	2	1,990
Wildcats	10	.....	....	10	.....
Willacy:					
Willamar	3	3	....	....	1,707
Wildcats	2	.....	....	2	.....
Total, 1941	1,292	972	47	273	445,880
Wells Drilled Deeper					
Nueces:					
Agua Dulce	1	1	....	....	200
Jackson:					
Ganado	5	5	....	....	1,575
Lolita	1	1	....	....	500
Jim Wells:					
Premont	1	.....	....	1	.....
Luby	1	1	....	....	500
Nueces:					
Stratton	1	.....	....	1	.....
Turkey Creek	1	.....	....	1	.....
Saxet Heights	1	1	....	....	10
Total, 1941	12	9	....	3	3,085

South Texas: Laredo Area

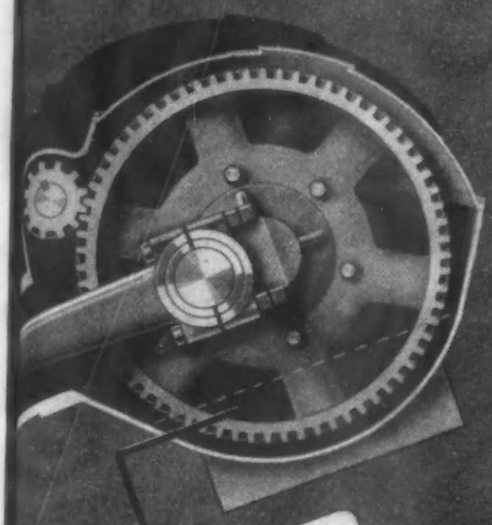
County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	799	444	46	309	111,295
Wells drilled deeper	9	1	5	3	76
Total, 1941	808	445	51	312	111,371
Total, 1940	1,043	613	39	391	129,432
New Wells Drilled for Oil or Gas					
Duval:					
Bridwell	7	6	....	1	1,995
Casa Blanca	27	14	4	9	621
Cedro Hill	11	8	....	3	333
Charamousca	24	18	1	5	1,696

(Continued on page 122)

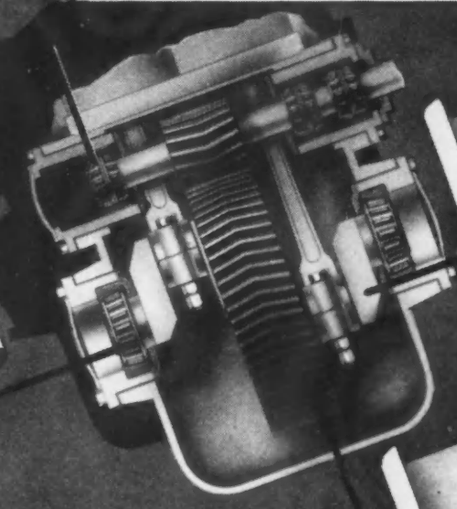
TO RECOGNIZE VALUE

They Made GASOS the Worlds Leading Pipe Line Pumps

For over 25 years we have directed all our efforts to a single goal: the design and manufacture of better pipe line pumps. Never have we wavered from that objective, never have we faltered in our policy of continuous development and improvement. . . . Is it any wonder, under those conditions, that GASOS should have earned the position of leadership that pipeline engineers and superintendents have accorded them? It's the engineering that sells GASOS and their day-in-and-day-out performance that keeps them sold . . . Ask for catalog . . . Gaso Pump & Burner Mfg. Co., 902 E. First Street, Tulsa, Okla. Export Office: 149 Broadway, New York. Houston: 5716 Buffalo Speedway. Los Angeles: Service Oil Field Supply Co., 5333 S. Riverside Drive.



FLOOD LUBRICATION
for years, crosshead and connecting-rod bearings — by oil bath in enclosed crankcase



EXTRA-LARGE ROLLER BEARINGS
mount crank and pinion shafts, each operating in separate removable housing sealed off from crankcase oil

CRANKS SET AT 90-DEGREE ANGLE
give overlapping piston stroke, assuring smooth flow

HERRINGBONE GEARS
are center-mounted on shafts to equalize loads on bearings

PUMPS

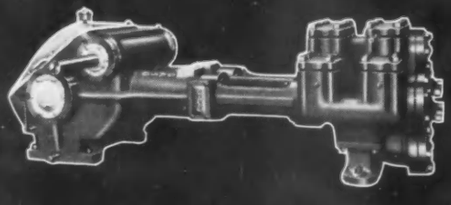


Fig. 1550. 59 bbls. at 1000 lbs. to 255 bbls. at 300 lbs.

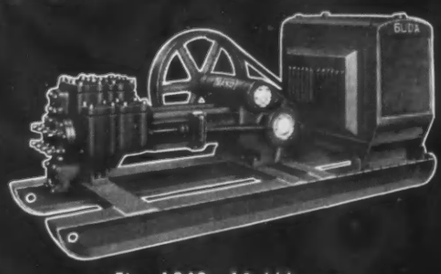


Fig. 1849. 46 bbls. at 900 lbs. to 126 bbls. at 350 lbs.

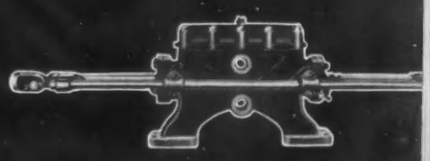


Fig. 301. Piston Power Pump. 24 to 30-inch stroke. 31.73 to 157.36 bbls. per hour.

South Texas: Laredo Area Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Chiltipin	2	1	1	....	18
Cole	6	3	....	3	96
Colmena	2	.....	....	2	.....
Driscoll	16	14	....	2	7,332
E. Benavides	2	1	....	1	250
E. Cole	2	2	....	....	68
Government Wells	3	3	....	....	290
Hoffman	21	9	3	9	1,115
Kohler	1	.....	1	....	.....
Kreis	12	7	....	5	1,605
Labbe	2	1	1	....	91
Lopes	1	.....	....	1	.....
Lundell	17	10	3	4	630
Murallia	1	1	....	....	60
N. Sweden	3	2	....	1	116
Palangana	1	.....	....	1	.....
Peters	1	.....	....	1	.....
Piedre Lumbre	12	7	1	4	600
Rancho Solo	1	1	....	....	17
Sejita	3	2	....	1	450
Sisters	3	2	....	1	380
S. Charamousca	1	.....	....	1	.....
Southland	1	.....	....	1	.....
S. Sweden	1	1	....	....	25
Sweden	2	1	....	1	500
Tarancahuas	3	....	....	3	.....
W. Casa Blanca	3	3	....	....	186
Wildcats	50	2	1	47	300
Jim Hogg:					
Chaparosa	2	.....	1	1	.....
Colorado	82	76	2	4	27,392
Henne-Winch-Farris	1	.....	....	1	.....
Holbein	9	7	....	2	681
Kelsey	5	4	....	1	1,089
Las Animas	1	.....	1	....	.....
Manila	15	11	2	2	1,482
S. Colorado	1	.....	....	1	.....
Wildcats	32	1	4	27	77
La Salle:					
Washburn	2	1	....	1	1,500
Wildcats	4	.....	....	4	.....
Live Oak:					
N. Jacob	1	1	....	....	38
Oakville	1	1	....	....	350
S. White Creek	1	1	....	....	300
McMullen:					
Calliham	1	.....	....	1	.....
Jacob	2	2	....	....	22
Rhode	2	.....	1	1	.....
San Jose	1	.....	....	1	.....
S. Calliham	2	.....	....	2	.....
S. Camnana	7	5	1	1	1,108
Wildcats	15	1	1	13	157
Starr:					
Boyle	12	3	....	9	285
Charco Blanco	1	.....	....	1	.....
Kelsey	15	10	....	5	3,875
La Reforma	2	1	....	1	500
Los Olmos	2	2	....	....	6
N. Rincon	10	8	....	2	2,948
Rincon	86	72	2	12	29,763
Rio Grande City	11	5	....	6	730
Salinas	2	.....	....	2	.....
Samfordyce-Sullivan City	11	10	1	....	3,200
Sun	31	24	....	7	9,171
Yturria	3	3	....	....	1,350
Ysaguirra	1	.....	....	1	.....
Wildcats	29	1	3	25	21
Webb:					
Adami	1	.....	....	1	.....
Glen	27	24	3	....	3,963
Killam	37	35	1	1	2,455
Laurel	2	.....	....	2	.....
Volpe	1	.....	....	1	.....
W. Cole	2	.....	....	2	.....
Wildcats	41	.....	....	41	.....
Zapata:					
Charco Redondo	12	12	....	....	18
Escobas	10	3	....	7	37
Glen	3	1	....	2	3
Lopenco	9	.....	7	2	.....
Wildcats	9	.....	....	9	.....
Total, 1941	799	444	46	309	111,295
Wells Drilled Deeper					
Duval:					
Charamousca	1	1	....	....	76
Government Wells	1	.....	....	1	.....
Webb:					
Carolina-Texas	1	.....	....	1	.....
Zapata:					
Lopena	6	.....	5	1	.....
Total, 1941	9	1	5	3	76

South Texas: San Antonio Area

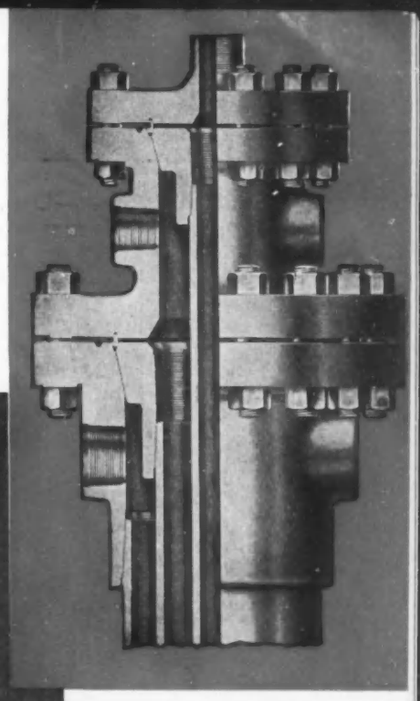
County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	286	153	4	129	15,887
Wells drilled deeper	3	.....	.....	3	.....
Total, 1941	289	153	4	132	15,887
Total, 1940	253	97	3	153	10,461
New Wells Drilled for Oil or Gas					
Atascosa:					
Wildcats	4	.....	....	4	.....
Bastrop:					
Elgin	4	1	....	3	100
Lentz	3	2	....	1	577
Red Rock	1	1	....	....	22
W. Cedar Creek	2	.....	....	2	.....
Wildcats	8	1	....	7	497
Bexar:					
Alta Vista	3	2	....	1	12
Black Hills	1	.....	....	1	.....
Gas Ridge	51	49	....	2	119
La Coste	5	1	3	1	25
N. Somerset	2	1	....	1	7
Tenney Creek	1	1	....	....	250
Von Ormy	1	1	....	....	8
Wildcats	17	1	....	16	15
Burleson:					
Wildcat	1	.....	....	1	.....
Burnet:					
Wildcat	1	.....	....	1	.....
Caldwell:					
Bee Creek	15	14	....	1	5,276
Luling	2	2	....	....	36
Salt Flats	2	1	....	1	15
Tenney Creek	30	23	....	7	4,807
Wildcats	9	1	....	8	12
Dimmitt:					
Carrizo	3	1	....	2	76
Wildcats	6	1	1	4	75
Frio:					
Pearsall	6	6	....	....	2,717
Wildcat	1	.....	....	1	.....
Gonzales:					
Wildcats	4	.....	....	4	.....
Guadaulupe:					
Darst Creek	4	3	....	1	93
Day	2	.....	....	2	.....
Elm Creek	16	15	....	1	65
Wildcats	5	.....	....	5	.....
La Salle:					
Washburn	1	1	....	....	1,000
Lee:					
Tanglewood	1	.....	....	1	.....
Wildcats	5	.....	....	5	.....
Maverick:					
Wildcat	1	.....	....	1	.....
Medina:					
Chicon Lake	16	13	....	3	39
Wildcats	7	.....	....	7	.....
Milam:					
Minerva Rockdale	5	3	....	2	9
Wildcats	7	.....	....	7	.....
Real:					
Wildcat	1	.....	....	1	.....
Travis:					
Kimbro	1	1	....	....	5
Wildcats	3	.....	....	3	.....
Uvalde:					
Wildcat	1	.....	....	1	.....
Val Verde:					
Vinnegarone	3	3	....	....	11
Williamson:					
Byersville	1	.....	....	1	.....
Chapman-Abbott	1	1	....	....	5
Thrall	1	1	....	....	6
Wildcats	8	.....	....	8	.....
Wilson:					
Lavernia	2	1	....	....	5
Wildcats	10	1	....	9	3
Zavalla:					
Wildcat	1	.....	....	1	.....
Total, 1941	286	153	4	129	15,887
Wells Drilled Deeper					
Bastrop:					
Wildcat	1	.....	....	1	.....
Guadalupe:					
Wildcat	1	.....	....	1	.....
Maverick:					
Wildcat	1	.....	....	1	.....
Total, 1941	3	.....	....	3	.....

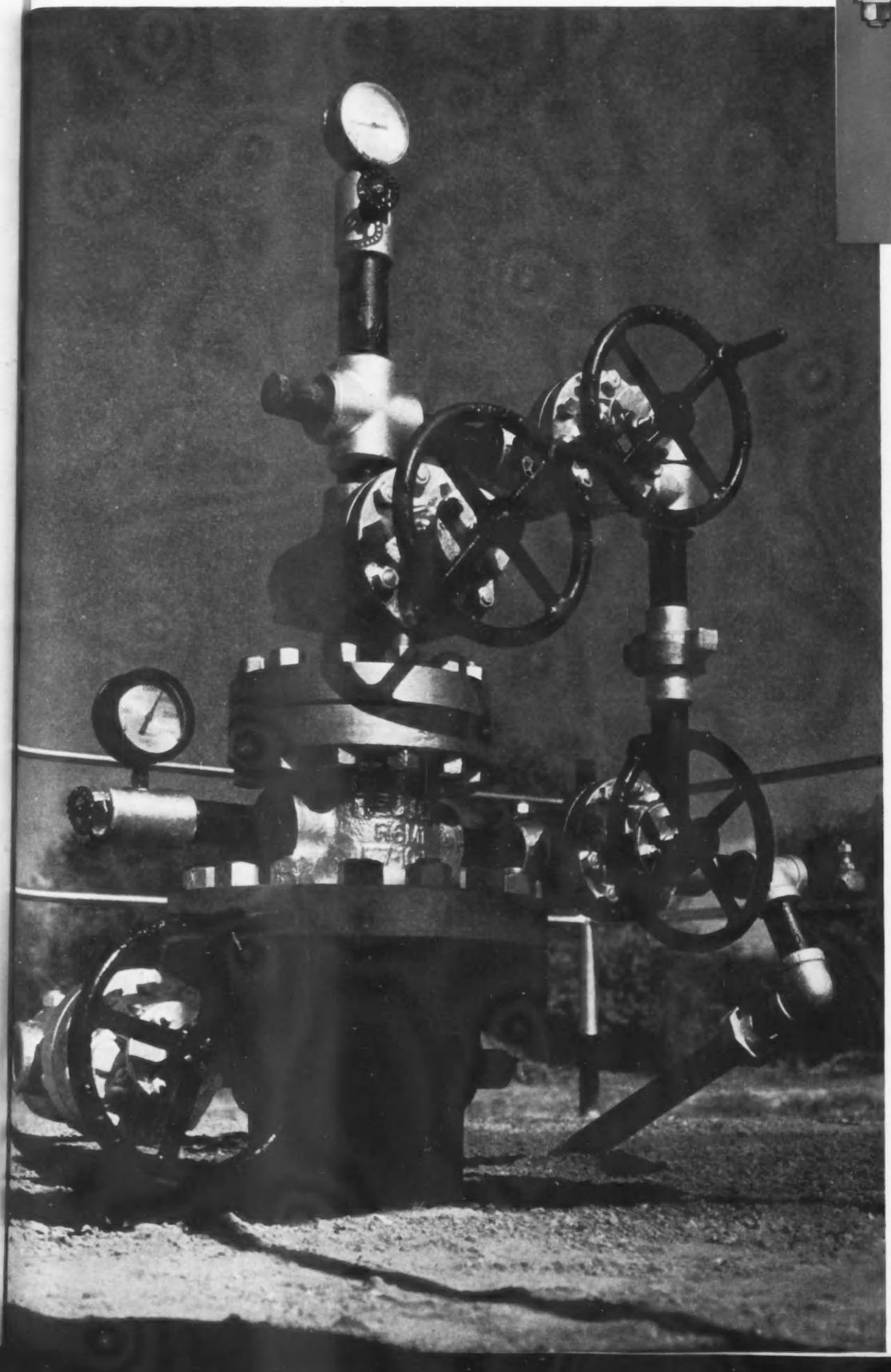
Texas Gulf Coast

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
All Completions Shown Were New Wells Drilled for Oil or Gas					
Austin:					
Wildcat	1	.....	....	1	.....
Brazoria					
Angleton (Anchor)	1	1	....	....	188
Chenango	3	1	....	....	150
Chocolate Bayou	3	3	....	....	674
Damon Mound	2	.....	....	2	.....
Danbury	2	1	....	1	18
Hastings	5	3	....	2	1,677
Lochridge	1	1	....	....	322
Manvel	3	2	1	....	985
N. Lochridge	2	1	....	1	62
Old Ocean	39	38	....	1	13,626
Rowan	3	1	1	1	185
Sandy Point	1	1	....	....	33
W. Columbia	30	27	....	3	9,105
Wildcats	15	2	....	13	617
Burleson:					
Wildcat	1	.....	....	1	.....
Chambers:					
Anahuac	25	21	....	4	11,312
Barbers Hill	21	21	....	....	5,470
Caplen	1	1	....	....	357
Fig Ridge	3	2	....	1	849
Fisher's Reef	2	1	....	1	173
Oyster Bayou	3	3	....	....	2,170
Red Fish Reef	9	8	1	....	1,302
Seabreeze	2	2	....	....	693
Turtle Bay	2	2	....	....	248
Willow Slough	1	1	....	....	253
Wildcats	4	1	....	3	666
Colorado:					
Garwood	1	1	....	....	301
Sheridan	1	1	....	....	145
W. Garwood	4	3	....	1	769
Fort Bend:					
Big Creek	3	2	....	1	86
Blue Ridge	6	5	....	1	781
Boling	3	2	....	1	992
Clodine	4	4	....	....	979
Moore's Bluff	1	.....	....	1	.....
Nash Dome	1	.....	....	1	.....
Needville	1	.....	1	....	.....
Thompsons	3	3	....	....	430
N. Thompsons	6	4	....	2	639
S. Thompsons	2	2	....	....	181
Wildcats	5	1	1	3	108
Galveston:					
Alta Loma	2	1	....	1	374
Caplen	6	4	1	1	909
Dickinson	6	5	1	....	1,381
Gillock	3	2	....	1	536
Green's Lake	5	3	....	2	233
High Island	2	2	....	....	283
League City	8	5	....	3	1,172
Red Fish Reef	1	1	....	....	178
Grimes:					
Wildcats	2	.....	....	2	.....
Hardin:					
Arriola	1	.....	....	1	.....
Batson	6	2	1	3	17
New Batson	1	1	....	....	227
Saratoga	8	3	....	5	51
Sour Lake	11	10	....	1	1,019
Wildcats	2	.....	....	2	.....
Miscellaneous	1	1	....	....	206
Harris:					
Bammel	1	.....	1	....	.....
Clear Lake	1	1	....	....	444
Dyersdale	37	33	1	3	8,355
Eureka	1	.....	....	1	.....
Fairbanks	6	6	....	....	877
Goose Creek	8	8	....	....	644
Humble	17	17	....	....	838
Joyce Richardson (Ogburn)	1	.....	1	....	.....
Pierce Junction	6	6	....	....	1,156
S. Houston	2	2	....	....	287
Tomball	18	16	....	2	3,923
Wildcats	13	.....	....	13	.....
Jackson:					
La Ward	1	1	....	....	560
Lolita	3	3	....	....	351
West Ranch	1	1	....	....	347
Jefferson:					
Fannett	22	18	1	3	9,869
La Belle	2	2	....	....	497
Lovell's Lake	18	17	1	....	2,063
Sabine Pass	1	.....	....	1	.....
South China	3	1	....	2	167
Spindletop	1	1	....	....	26
W. Beaumont	5	5	....	....	330
Wildcats	5	2	....	3	774
Lee:					
Wildcats	2	.....	....	2	.....

(Continued on page 124)

SAFE STRONG COMPACT DURABLE





A FOUR-WORD STORY

. . . by Thousands of Satisfied Users of RECTORHEADS

Here is one of the surface hook-ups assembled and tested by Rector for discriminating well owners. The foundation of the Christmas-tree is a combination of the Rector Type "6M" Mandrel Suspension Tubing Head and Casing Head (presented above). It's the last word in safe, strong, compact, durable units, say the men who buy them and the men who install them . . . and here's good reason:

This casing head-tubing head combination, aside from having the usual advantages offered in other heads provides the following *exclusive advantages:*

1. No fabric, or soft packing of any kind.
2. Automatic hold-down on pipe prevents expansion from heat or pressure.
3. Positive metal-to-metal seat prevents any wedging action.
4. The iron ring, accepted as the best packing means obtainable, is the *only packing* employed in these heads.
5. Use of iron ring only makes anchor rods and clamps unnecessary.

Yes, the usual advantages, plus these five exclusive RECTORHEAD advantages, represent the extra value RECTORHEAD buyers are getting.

These Mandrel Type RECTORHEAD are manufactured with either threaded mandrel, or with welding arrangement, in 2,000, 4,000, 6,000 and 10,000 pound test.

See your Composite Catalog, or write for full details.

RECTOR WELL EQUIPMENT CO. INC. — RECTOR — "MAKING THE OIL INDUSTRY SAFER"

RECTOR WELL EQUIPMENT CO., IN
FORT WORTH, TEXAS, U. S. A.

Representatives in All Active Drilling Areas

EXPORT AGENT:
Lucey Export Corporation
Woolworth Bldg., N. Y. C.

Sold By Leading Supply Companie

Texas Gulf Coast—Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Liberty:					
Esperson	12	9	1	2	3,481
Hardin	6	6	....	....	1,394
Hull	26	24	....	2	4,225
Martha	6	5	....	1	563
N. Dayton	1	1	....	....	237
S. Esperson	1	.....	....	1	.....
S. Liberty	8	5	....	3	481
Wildcats	7	1	....	6	196
Madison:					
Wildcat	1	.....	....	1	.....
Matagorda:					
Bay City	8	8	....	....	1,482
Blessing	6	2	2	2	280
Buckeye	1	.....	....	1	.....
Lucky	3	1	....	2	181
Markham	10	7	....	3	1,650
N. Markham	13	13	....	....	2,305
Old Ocean	1	1	....	....	423
Orange	1	1	....	....	58
S. Bay City (Hamon)	3	3	....	....	728
Wilson Creek	1	.....	....	1	.....
Wildcats	7	1	....	6	75
Montgomery:					
Conroe	1	1	....	....	421
Lake Creek	2	2	....	....	485
W. Conroe	1	1	....	....	35
Wildcats	6	2	....	4	295
Orange:					
Orange	3	3	....	....	391
W. Orange	3	3	....	....	206
Port Neches	5	3	....	2	750
W. Port Neches	7	6	....	1	658
Wildcats	2	.....	....	2	.....
Polk:					
Segno	15	13	1	1	2,815
Wildcats	2	1	....	1	112
San Jacinto:					
Wildcat	1	.....	....	1	.....
Tyler:					
Joe's Lake	4	2	....	2	528
Spurger	3	1	1	1	5
Wildcats	5	1	1	3	218
Walker:					
Wildcats	3	.....	....	3	.....
Waller:					
Katy	1	.....	1	....	.....
Wildcats	2	.....	....	2	.....
Washington:					
Wildcat	1	.....	....	1	.....
Wharton:					
Boling	7	6	....	1	302
Hillje	4	2	1	1	150
Kubela	1	.....	1	....	.....
Lakeview	1	.....	1	....	.....
Louise	1	1	....	....	47
Mackey (Borden Abel)	1	.....	....	1	.....
Magnet	14	14	....	....	1,053
Pickett Ridge	1	1	....	....	75
Spanish Camp	2	.....	2	....	.....
Withers	46	44	....	2	5,249
Wildcats	9	.....	....	9	.....
Total, 1941	742	548	25	169	126,194
Total, 1940	1,185	941	25	219	241,119

Texas Panhandle

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	707	636	45	26	138,217
Wells drilled deeper	1	1	....	....	123
Total, 1941	708	637	45	26	138,340
Total, 1940	627	517	83	27	143,333
New Wells Drilled for Oil or Gas					
Carson	61	53	5	3	8,961
Gray	260	248	2	10	53,865
Hemphill	1	.....	....	1	.....
Hutchinson	302	296	4	2	70,654
Moore	30	.....	30	....	.....
Potter	4	.....	1	3	.....
Sherman	1	.....	1	....	.....
Wheeler	48	39	2	7	4,737
Total, 1941	707	636	45	26	138,217
Wells Drilled Deeper					
Gray	1	1	....	....	123
Total, 1941	1	1	....	....	123

West Texas

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	2,312	2,110	11	191	1,770,034
Wells drilled deeper	52	42	1	9	12,080
Salt water disposal wells	1	.....	....	....	.....
Total, 1941	2,365	2,152	12	200	1,782,114
Total, 1940	1,937	1,786	12	139	1,600,399
New Wells Drilled for Oil or Gas					
Andrews:					
Embar	3	2	....	1	1,415
Emma	18	17	....	1	18,389
Means	4	4	....	....	1,911
N. Cowden	5	5	....	....	1,993
Wildcats	8	1	....	7	20
Bailey:					
Wildcat	1	.....	....	1	.....
Borden:					
Wildcats	4	.....	....	4	.....
Brewster:					
Wildcats	2	.....	....	2	.....
Cochran:					
Slaughter	158	156	....	2	140,609
Wildcat	1	.....	....	1	.....
Crane:					
Church-Fields	4	4	....	....	948
Dune	4	4	....	....	311
Ella Waddell	5	4	....	1	667
Gulf-McElroy	11	11	....	....	6,932
Gulf-Waddell	13	11	....	2	50,613
Jordan	9	9	....	....	18,236
McCamey	1	1	....	....	218
McClintic	1	1	....	....	5
Sand Hills Deep	11	10	....	1	53,839
Sand Hills	45	43	1	1	82,231
Sand Hills Ellenberger	1	1	....	....	9,770
Wildcats	3	2	....	1	1,325
Crockett:					
Bean	2	.....	....	2	.....
Clara Couch	1	1	....	....	108
Crockett	8	6	....	2	804
Hoover	1	1	....	....	29
Soma-Noelke	30	22	5	3	62,220
S. Sand Hills	1	1	....	....	2,037
Todd Deep	7	6	....	1	17,687
University	1	1	....	....	8
World-Powell	17	16	....	1	2,459
Wildcats and Miscl	12	3	....	9	638
Culberson:					
Wildcat	1	.....	....	1	.....
Dawson:					
Wildcats	2	.....	....	2	.....
Dickens:					
Wildcat	1	.....	....	1	.....
Ector:					
Douro	1	1	....	....	86
Embar	1	1	....	....	113
Foster	161	156	....	5	117,648
Goldsmith	56	56	....	....	57,588
Harper	2	2	....	....	417
Jordan	22	21	....	1	15,349
Judkins	2	2	....	....	1,225
N. Cowden	89	89	....	....	71,760
N. Goldsmith	6	5	....	1	629
S. Cowden	1	1	....	....	567
Wildcats	6	1	....	5	35
El Paso:					
Wildcat	1	.....	....	1	.....
Fisher:					
McCaulley	5	3	....	2	426
Royston	1	.....	....	1	.....
Wildcats	4	1	....	3	267
Gaines:					
Cedar Lake	23	21	....	2	13,758
Seminole	128	127	....	1	70,614
Wasson	36	35	....	1	28,124
Wasson-Deep	2	2	....	....	1,301
Garza:					
Wildcat	1	.....	....	1	.....
Glasscock:					
Wildcat	1	.....	....	1	.....
Hale:					
Wildcat	1	.....	....	1	.....
Hockley:					
Slaughter	459	457	....	2	498,944
Howard:					
Miscellaneous	20	20	....	....	6,347
Wildcats	2	.....	....	2	.....

(Continued in next column)

West Texas—Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Hudspeth:					
Wildcat	1	.....	....	1	.....
Irion:					
Wildcats	3	.....	....	3	.....
Loving:					
Wildcats	3	.....	....	3	.....
Lubbock:					
Wildcats	2	1	....	1	124
Lynn:					
Wildcats	2	.....	....	2	.....
Martin:					
Wildcats	2	.....	....	2	.....
Manard:					
Miscellaneous	2	.....	1	1	.....
Mitchell:					
Iatan	1	1	....	....	192
Northwest	37	35	....	2	7,520
Wildcats	6	.....	....	6	.....
Motley:					
Wildcat	1	.....	....	1	.....
Nolan:					
Wildcat	1	.....	....	1	.....
Pecos:					
Abell	46	42	2	2	48,611
Apco	7	5	....	2	5,590
Conry-Davis	5	5	....	....	737
Fromme	1	1	....	....	42
Lehn	13	12	....	1	934
Masterson	2	1	....	1	48
Payton	1	1	....	....	121
Pecos Valley	5	3	....	2	499
Shearer	6	3	....	3	120
Taylor Link	27	21	....	6	8,157
Tobarg	28	27	....	1	1,111
Walker	38	36	....	2	3,609
White-Baker	9	8	....	1	669
Yates	3	1	....	2	155
Wildcats	18	2	1	15	382
Presidio:					
Wildcat	1	.....	....	1	.....
Reagan:					
Barnhart	1	.....	....	1	.....
Big Lake	1	1	....	....	512
Skelly-Grayson	1	.....	....	1	.....
Wildcats	2	1	....	1	1,122
Reeves:					
Wildcat	1	.....	....	1	.....
Runnels:					
Beddo	1	1	....	....	171
Wildcats	3	.....	....	3	.....
Scurry:					
Northwest	3	3	....	....	361
Sharon	28	24	....	4	3,653
Wildcat	1	.....	....	1	.....
Stonewall:					
Aspermant	1	.....	....	1	.....
Boyd	2	.....	....	2	.....
Carlisle	2	.....	....	2	.....
Wildcat	1	.....	....	1	.....
Sutton:					
Wildcat	1	.....	....	1	.....
Terrell:					
Wildcats	2	.....	....	2	.....
Terry:					
Slaughter	16	16	....	....	26,669
Wildcats	5	.....	....	5	.....
Tom Green:					
Funk	2	.....	....	2	.....
Wildcats	2	.....	....	2	.....
Upton:					
Gulf-McElroy	29	29	....	....	29,548
McCamey	26	23	....	3	5,467
McClintic	6	6	....	....	2,138
Wildcats	2	.....	....	2	.....
Valverde:					
Wildcat	1	.....	....	1	.....
Ward:					
Shipley Deep	1	1	....	....	782
Miscellaneous	108	101	....	7	57,637
Winkler:					
Emperor	9	7	1	1	6,288
Gulf-O'Brien	6	6	....	....	1,261
Halley	6	6	....	....	4,005
Hendrick	14	13	....	1	3,702
Kermit	1	1	....	....	191
Keystone	77	75	....	2	22,506
Scarborough	2	2	....	....	407
Wildcats	3	.....	....	3	.....
Yoakum:					
Waples-Platter	10	9	....	1	4,992
Wasson	236	236	....	....	159,381
Wildcat	1	.....	....	1	.....
Total, 1941	2,312	2,110	11	191	1,770,034
Wells Drilled Deeper					
Cochran:					
Dial	1	.....	....	1	.....
Concho:					
Wildcat	1	.....	....	1	.....
Crane:					
Church-Fields	2	2	....	....	206
Gulf-McElroy	4	4	....	....	797
McCamey	2	2	....	....	35

(Continued on page 126)

Facing The Facts

TODAY America comes first with everyone. Even before Pearl Harbor — for over a year — the Wheland Company had been manufacturing Guns, Shell and Windlasses for our Government. Today our efforts in behalf of our armed forces have new significance . . . and new vigor.

Most of this war equipment is being made in new Plants or Departments with specialized machines. Therefore, our regular line of Rotary Drilling Equipment could be turned out, as in the past, if the materials and men were not so necessary for defense needs. We have lost many unit sales. Obviously, we regret this, but it cannot be helped. What we are now vitally interested in is KEEPING ALL ROTARY EQUIPMENT, IN THE FIELDS, IN OPERATION. We all know the part oil must play in winning the war. Our duty is plain.

The Wheland Company, its Distributors and Service Men can help by supplying information that will assist our customers in getting longer life and better service from each unit. Also, by supplying each necessary replacement part as promptly as possible. The Oil Industry has our pledge to do this.

All operators can help, too, by the use of correct lubricants, careful installations and alignment; the operation of each unit within its rated capacity and other obvious, but not always adhered to, ways. And by anticipating their wants as far in advance as possible.

Proper maintenance and care of any machine has always paid real dividends. There is no alternative, now. It is our sincere desire to help you avoid "time out."

Arch O. Wheland

Vice President

DISTRIBUTORS: Lucey Products Corporation, Tulsa, Okla.; Houston Oil Field Material Co., Inc., Houston, Texas; Murray-Brooks Hardware Co., Ltd., Lake Charles, La.; Frick-Reid Supply Corporation, Tulsa, Okla. EXPORT: Lucey Export Corporation, 3505 Woolworth Building, New York, N. Y., Broad Street House, London, E.C. 2, England.

THE WHELAND COMPANY

ROTARY DRILLING EQUIPMENT

Chattanooga, Tenn.

West Texas—Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Crockett:					
Hoover	1	1	....	....	10
Todd	1	....	....	1	.....
Culberson:					
Wildcat	1	....	....	1	.....
Ector:					
Foster	1	1	....	....	20
N. Cowden	1	1	....	....	392
Gaines:					
Wasson	2	2	....	....	1,822
Garza:					
Miscellaneous	1	1	....	....	15
Howard:					
Miscellaneous	5	5	....	....	1,929
Pecos:					
Abell	1	....	1	....	.....
Pecos Valley	1	....	....	1	.....
Terrell:					
Wildcat	1	....	....	1	.....
Upton:					
McCamey	8	7	....	1	855
McClintic	2	2	....	....	463
Ward:					
Wildcat	1	....	....	1	.....
Winkler:					
Kermit	5	5	....	....	135
Keystone	2	2	....	....	178
Yoakum:					
Wasson	8	7	....	1	5,223
Total, 1941	52	42	1	9	12,080
Salt Water Disposal Wells					
Pecos:					
Abell Field	1	....	....	....	.....
Total, 1941	1	....	....	....	.....

West Central Texas

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	641	274	37	330	38,329
Wells drilled deeper	3	2	....	1	205
Gas input wells	1	....	....	....	.....
Total, 1941	645	276	37	331	38,534
Total, 1940	698	334	29	335	64,827
New Wells Drilled for Oil or Gas					
Bosque:					
Wildcat	1	....	....	1	.....
Brown:					
Miscellaneous	44	15	11	18	552
Wildcats	16	1	....	15	5
Burnett:					
Wildcat	1	....	....	1	.....
Callahan:					
Miscellaneous	42	15	2	25	114
Wildcats	21	1	....	20	31
Coleman:					
Miscellaneous	43	26	6	11	5,138
Wildcats	18	5	2	11	842
Comanche:					
Miscellaneous	12	8	....	4	239
Wildcats	11	2	....	9	23
Eastland:					
Miscellaneous	25	16	3	6	2,535
Wildcats	10	....	....	10	.....
Erath:					
Wildcat	1	....	....	1	.....
Hamilton:					
Wildcats	6	....	1	5	.....
Miscellaneous	2	....	2	....	.....
Hood:					
Wildcats	2	....	....	2	.....
Jones:					
Miscellaneous	115	87	....	28	18,031
Wildcats	27	6	....	21	1,710
Lampasas:					
Wildcat	1	....	....	1	.....
McCulloch:					
Wildcats	6	....	....	6	.....
Mills:					
Wildcats	2	....	....	2	.....
Palo Pinto:					
Wildcats	7	....	1	6	.....
Miscellaneous	9	1	....	8	18
Parker:					
Wildcats	3	....	....	3	.....
Shackleford:					
Miscellaneous	121	66	1	54	3,853
Wildcats	38	1	1	36	55
Somervell:					
Wildcat	1	....	....	1	.....

(Continued in next column)

West Central Texas—Continued

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Stephens:					
Miscellaneous	20	11	4	5	2,690
Wildcats	4	....	1	3	.....
Tarrant:					
Wildcats	2	....	....	2	.....
Taylor:					
Merkel	4	4	....	....	1,707
Miscellaneous	15	7	2	6	520
Wildcats	11	2	....	9	268
Total, 1941	641	274	37	330	38,329
Wells Drilled Deeper					
Jones County	1	1	....	....	180
Runnels County	1	....	....	1	.....
Stephens County	1	1	....	....	25
Total, 1941	3	2	....	1	205
Gas Input Wells					
Shackleford County	1	....	....	....	.....
Total, 1941	1	....	....	....	.....

Utah

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
New Wells Drilled for Oil or Gas					
Daggett:					
Clay Basin	1	....	1	....	.....
Grand:					
Sandberg	2	....	....	2	.....
Total, 1941	3	....	1	2	.....
Total, 1940	3	....	3	....	.....

West Virginia

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	742	115	508	119	1,735
Wells drilled deeper	32	4	24	4	11
Total, 1941	774	119	532	123	1,746
Total, 1940	649	120	419	110	905
New Wells Drilled for Oil or Gas					
Boone	34	4	26	4	220
Braxton	34	2	14	18	2
Cabel	17	1	15	1	25
Calhoun	70	28	38	4	305
Clay	32	6	20	6	43
Doddridge	7	2	4	1	10
Fayette	1	....	1	....	.....
Gilmer	58	9	40	9	40
Hancock	6	6	....	....	20
Harrison	8	....	7	1	.....
Jackson	52	3	48	1	532
Kanawha	71	3	64	4	8
Lewis:					
Miscellaneous	8	1	6	1	3
Freemans Creek Dist	1	....	1	....	.....
Lincoln	31	3	26	2	114
Logan	7	....	6	1	.....
Marion	5	2	2	1	30
Marshall	7	....	7	....	.....
Mason	1	....	1	....	.....
Mingo	7	1	6	....	4
Monongalia	10	....	6	4	.....
Nicholas	1	....	1	....	.....
Pleasants	17	10	6	1	30
Preston	1	....	....	1	.....
Putnam	53	1	49	3	50
Ritchie	76	15	39	22	160
Roane	18	7	3	8	97
Taylor	5	....	4	1	.....
Tyler	6	4	1	1	9
Upshur	26	....	21	5	.....
Wayne	41	1	37	3	6
Wetzel	15	2	9	4	11
Wirt	9	....	....	9	.....
Wood	7	4	....	3	16
Total, 1941	742	115	508	119	1,735

(Continued in next column)

West Virginia—Continued

County	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
Wells Drilled Deeper					
Boone	1	....	1	....	.....
Braxton	2	....	2	....	.....
Cabel	1	....	1	....	.....
Doddridge	1	....	....	1	.....
Gilmer	2	1	....	1	1
Jackson	1	1	....	....	4
Kanawha	2	....	2	....	.....
Lincoln	10	....	9	1	.....
Marion	2	1	1	....	4
Marshall	2	....	1	1	.....
Monongalia	1	....	1	....	.....
Putnam	4	....	4	....	.....
Ritchie	3	1	2	....	2
Total, 1941	32	4	24	4	11

Wyoming

County and Field	Completions	Oil Wells	Gas Wells	Dry Holes	Initial Oil Production
SUMMARY—					
New wells drilled for Oil or Gas	120	95	5	20	36,889
Wells drilled deeper	17	15	2	....	5,007
Total, 1941	137	110	7	20	41,896
Total, 1940	143	111	5	27	92,389
New Wells Drilled for Oil or Gas					
Big Horn:					
Byron	1	1	....	....	430
Torchlight	1	....	....	1	.....
Campbell:					
Rocky Point	1	....	....	1	.....
Carbon:					
Bailey Dome	1	....	....	1	.....
Bunker Hill	1	....	1	....	.....
E. Allen Lake	1	....	1	....	.....
Elk Mountain	1	....	....	1	.....
Herne	1	....	....	1	.....
Mahoney	4	4	....	....	876
Mahoney Dome	1	1	....	....	766
Rock River	4	3	....	1	552
Wertz	7	7	....	....	11,195
Crook:					
Kara Terrace	1	....	....	1	.....
Fremont:					
Bison Basin	1	....	....	1	.....
Circle Ridge	2	1	....	1	168
Maverick Springs	6	6	....	....	2,645
Muskrat	1	....	1	....	.....
Plunkett	2	2	....	....	115
Hot Springs:					
Hamilton Dome	1	....	....	1	.....
Kirby Creek	2	1	....	1	12
Natrona:					
Cole Creek	7	6	....	1	816
South Casper Creek	2	2	....	....	203
Niobrara:					
Lance Creek	19	18	....	1	9,951
Park:					
Frannie	3	3	....	....	750
Oregon Basin	8	8	....	....	2,465
Pole Cat	1	....	....	1	.....
Sublette:					
La Barge	14	13	....	1	1,488
Sweetwater:					
Canyon Creek	1	....	1	....	.....
Lost Soldier	5	5	....	....	4,052
Washakie:					
Mahogany Butte	1	....	....	1	.....
Weston:					
Newcastle	1	1	....	....	2
Osage	17	13	1	3	403
Six Mile Basin	1	....	....	1	.....
Total, 1941	120	95	5	20	36,889
Wells Drilled Deeper					
Big Horn:					
Byron	1	1	....	....	250
Natrona:					
Salt Creek	5	5	....	....	703
Niobrara:					
Lance Creek	8	7	1	....	3,529
Park:					
Frannie Dome	2	2	....	....	525
Sweetwater:					
E. Hiawatha	1	....	1	....	.....
Total, 1941	17	15	2	....	5,007

Pipe Line Activity

Construction in 1941 almost double 1940 level; and only steel shortage dims prospects for coming year

FOLLOWING a comparative lull in pipe line construction over the past several years, the year 1941 saw a quick upturn in activity, brought about largely by conditions reflecting the national defense effort. Lines actually completed more than doubled 1940, but the outlook for 1942, while having a fair back-log of proposed construction, is considerably clouded by the prospect of not being able to obtain the necessary materials. Unless a proposed pipe line is found to be absolutely necessary to the public interest, or a definite contribution to the war effort, it seems likely that it will have little chance of obtaining a priority rating high enough to make the pipe and other materials available.

Crude oil, gasoline, and natural gas lines completed in 1941 totalled 7300 miles. This compares with 3000 miles in 1940, 4300 miles in 1939, and 1300 in 1938. An indication that a sharp slump in pipe line activity may be expected in 1942, and which may already be well on its way, is seen in the fact that at the close of 1940 there were 1150 miles of line building, and 3100 proposed, while at the turn of this last year, there were only 768 miles building, and 2100 miles proposed—an overall reduction of around 30 percent below the previous year's figures.

Construction of new crude oil carriers again was in the lead, with 2900 miles completed during 1941. Coming as a close second was the nearly 2700 miles of gasoline pipe lines completed, 1700 miles of natural gas carriers were finished.

Of particular interest from the national defense standpoint among the oil lines were two designed to relieve the coastwise tankers for use in more important theaters of the world conflict.

Probably the most important was Portland Pipe Line Company's 236-mile, 12-inch line beginning at Portland, Maine, and terminating at Montreal, Quebec, which effected a saving of at least six tanker days—three days each way.

Also of importance was the 84-mile, 10¾-inch Shell crude oil line that now makes possible the shipment of crude from Ventura County fields on the coast that formerly had been almost entirely dependent upon coastwise tankers.

Of great value in eliminating crucial bottlenecks in crude oil transportation systems from the Mid-Continent area to the Atlantic Seaboard, was the construction of numerous loops in the existing lines.

Reflecting the developments during the past year of the country's national defense and war effort, was the accelerated rate of construction of more gasoline carriers to help relieve the growing acute shortage of these products along the Atlantic seaboard, caused by the withdrawal of coastwise tankers for use elsewhere. In sharp contrast to the 810 miles of such lines laid in 1940, is the 2700 miles built in 1941.

Important United States Pipe Line Construction in 1941

(* Indicates Gasoline Lines)

COMPANY	ORIGIN	TERMINUS	Length (Miles)	Diameter (Inches)	Capacity (Barrels)	Status
Arkansas						
Louark Prod. Co.	Dorcheat	McKamie	18	6	Gas	Proposed
California						
Shell Pipe Line Co.	Ventura Ave. Field	Wilmington	84	10¾	22,000	Completed
Colorado						
Mountain Fuel Supply Co.	Powder Wash	Hiawatha	18	8⅝	Gas	Completed
Florida						
*Southeastern P. L. Co.	Pt. St. Joe	Chattanooga, Tenn.	458	6-8	30,000	Completed
Illinois						
Ashland Refining Co.	Sims Pool	Johnsonville	6	3	.....	Completed
Canyon P. L. Co.	Centralia	Sandoval	6	6	.....	Completed
Frontier-Kingwood-Compton	Iron Pool	Enfield	4	8	.....	Completed
Illinois P. L. Co.	Southeast Illinois	Bridgeport	60	8-10	.....	Completed
Illinois P. L. Co.	Southeast Illinois	Bridgeport	52	10-12	.....	Completed
Illinois P. L. Co.	Flat Rock	Stoy	10	10	.....	Completed
Illinois P. L. Co.	Benton	Enfield	37	8	.....	Completed
Illinois P. L. Co.	Parkersburg	Lancaster	6	4	.....	Completed
Illinois P. L. Co.	Parkersburg	Lancaster Station	10	8	.....	Completed
Merimac P. L. Co.	Johnsonville	Lisne	5½	5-7	.....	Completed
Pure Oil Co.	Calvin	Centerville	8	4	.....	Completed
Pure Oil Co.	Johnsonville	Asne Pool	6	6	.....	Completed
Pure Oil Co.	Johnsonville	West Clay City	4	4	.....	Completed
Scony-Vacuum	Wood River	Mitchell Station	9	10	.....	Completed
Sohio P. L. Co.	Benton	Hoodville	27	6	.....	Completed
Sohio P. L. Co.	Omaha	Storms	12	4	.....	Completed
Sohio P. L. Co.	Inman	Griffin Field	5	4	.....	Completed
Sohio P. L. Co.	Hoodville	Enfield	8	6	.....	Completed
Sohio P. L. Co.	Maud	Mt. Carmel	5	4	.....	Completed
Sohio P. L. Co.	Griffin	Albion	8	4	.....	Completed
Sohio P. L. Co.	Johnsonville	Flora	10	4	.....	Completed
Sohio P. L. Co.	Johnsonville	Flora Station	14	6	.....	Completed
Sohio P. L. Co.	Johnsonville	Flora Station	14	4	.....	Completed
Sohio P. L. Co.	Woodlawn	Dix	12	4	.....	Completed
Sohio P. L. Co.	Dix	Salem	10	6	.....	Completed

(Continued on Next Page)

Important United States Pipe Line Construction in 1941

(Continued from Preceding Page)

(* Indicates Gasoline Lines)

COMPANY	ORIGIN	TERMINUS	Length (Miles)	Diameter (Inches)	Capacity (Barrels)	Status
Illinois—Continued						
Sun Oil Co.	Rural Hill	Benton	2	4	.....	Completed
Superior Oil Co.	Albion	New Harmony	15	4	.....	Completed
Superior Oil Co.	New Harmony	Mt. Vernon, Ind.	15	6	.....	Completed
Texas P. L. Co.	Woodlawn	Salem	20	6	.....	Completed
Texas P. L. Co.	Johnsonville	Rural Hill Pool	32	6	.....	Completed
Texas P. L. Co.	Johnsonville	Boyleston Line	15	6	.....	Completed
Texas P. L. Co.	Johnsonville	Clay City	37	6	.....	Completed
Texas P. L. Co.	Woodlawn	Salem	17	6	.....	Completed
Toronto P. L. Co.	Calvin	Griffin	5	4	.....	Completed
Union P. L. Co.	Hoffman	Centralia	7	3	.....	Completed
Indiana						
British-American	Griffin Pool	Albion, Ill.	12	4	.....	Completed
Indiana Farm Bureau Refy.	Caborn Pool	Mt. Vernon	8	4	5,000	Completed
Iowa						
*Standard Oil Co. (Indiana)	Burlington Jct.	Des Moines	111	6	.....	Completed
*Standard Oil Co. (Indiana)	Council Bluffs	Sioux Falls, S.D.	171	6	.....	Completed
Kansas						
Aladdin Pet. Co.	McLouth	Cities Service Connection	9	6	Gas	Completed
Argus Natural Gas Co.	Finney County	Garden City	12	6⅝	Gas	Completed
Continental Oil Co.	Valley Center	Ponca City, Okla.	56	6	9,500	Completed
Derby Oil Co.	Hollow-Nikkel Pool	Cramm Pool	46	4	3,500	Completed
*Globe Oil & Refy. Co.	McPherson	Council Bluffs, Iowa	220	6⅝	.....	Completed
Kaw P. L. Co.	Burnett Pool	Ray Pool	40	6	22,000	Completed
Kaw P. L. Co. (Loops)	Chase	Susank	37	10	60,000	Completed
Kaw P. L. Co.	Ray Pool	Bemis	40	6	22,000	Completed
Kaw P. L. Co.	Bemis	Gorham	22	8	40,000	Completed
Kaw P. L. Co.	Susank	Chase	17	12–10–8	85,000	Building
Northern Natural Gas Co.	Clifton	(Loop)	26	24	Gas	Completed
*Phillips Pet. Co.	Paola	Missouri State Line	53	8	Loops	Completed
Phillips Pet. Co.	McPherson	Local Loop	5½	6	26,000	Completed
Republic Natural Gas Co.	Oklahoma State Line	Hugoton	14½	4	Gas	Completed
Skelly Oil Co.	Bloomer Pool	Hall-Gurney Pool	33	6	11,000	Completed
Skelly Oil Co.	Barton County	Trapp Area	30	6	12,000	Completed
Socony-Vacuum Oil Co.	Rice County	Local	23½	10	70,000	Completed
Socony-Vacuum Oil Co.	Roxbury Pool	Ritz-Canton	12	4	8,000	Completed
*Socony-Vacuum Oil Co.	Topeka	Sioux City	250	6	.....	Completed
Stanolind P. L. Co.	Otis-Albert, Pawnee Rock and Local Area	Stafford County	41	8–6–4	8,000	Completed
Stanolind P. L. Co.	Washington	Freeman, Mo. (Loops)	62	10	13,000	Completed
Texas Empire P. L. Co.	Ray Pool	Bemis Pool	40	6	14,000	Completed
Western Natural Gas Co.	Hugoton	Milwaukee, Wis.	770	..	Gas	Proposed
W. S. Fees P. L. Co.	McLouth	Dunavent	14	4	Gas	Building

COMPANY	ORIGIN	TERMINUS	Length (Miles)	Diameter (Inches)	Capacity (Barrels)	Status
South Louisiana						
Atlantic P. L. Co.	Neale	Atreco, Texas	65	8	.....	Proposed
*Plantation P. L. Co.	Baton Rouge	Greensboro, N. C.	1,261	8–10–12	60,000	Completed
United Gas P. L. Co.	Lirette	Mobile, Ala.	216	12–14–16	Gas	Building
United Gas P. L. Co.	De Quincy	Leesville	60	8–10	Gas	Completed
United Gas P. L. Co.	Gibson	Houma	25	10	Gas	Completed
North Louisiana						
Hope Natural Gas Co.	Monroe	West Virginia	826	20	Gas	Proposed
Memphis Natural Gas Co.	Monroe	Memphis, Tenn.	52	16–20	Gas	Building
Southern Prod. Co.	Logansport	Monroe	135	20	Gas	Completed
United Gas P. L. Co.	North Lisbon	Koran	50	4	Gas	Completed
Maine						
Portland P. L. Co.	Portland	Montreal, Canada	236	12	30,000	Completed
Massachusetts						
*Shell Oil Co.	Fall River	West Boylston	65	6⅝	10,000	Completed
Michigan						
Bay P. L. Co.	Monitor Field	Junction Station	3	4	2,200	Completed
Bay P. L. Co.	Adams Field	Bentley Station	15	4½	4,400	Completed
Consumers Power Co.	Dice Station	Carrolton	14	12½	Gas	Completed
Consumers Power Co.	Winterfield Field	Lincoln Station	4	4½	Gas	Completed
Consumers Power Co.	Wise Station	McBain	38	12½	Gas	Completed
Leonard P. L. Co.	Crystal Station	Alma	16	4½	6,000	Completed
Leonard P. L. Co.	Reed City Field	Olivers	5	4½	4,000	Completed
Leonard P. L. Co.	Roscommon Field	Hamilton Jct.	11½	6½	11,000	Completed
McClanahan P. L. Co.	Adams Field	Sterling	6	4	4,000	Completed
Mecosta P. L. Co.	Reed City Field	Big Rapids	23½	6	Gas	Completed
Michigan Cities Co.	Deerfield Field	Bundy Station	4	3½	Gas	Completed
Naph-Sol P. L. Co.	Muskrat Lake Pool	Bloomingdale	3½	4	2,500	Completed
Panhandle Eastern	Toledo Junction	Zilwaukee	147	12–18–20	Gas	Building
Panhandle Eastern	Toledo Junction	Kalamazoo	115	12–18	Gas	Proposed
Pure Transportation	Reed City Field	Reed City	5	6	4,000	Completed
Simrall Corp.	Reed City Field	Reed City	5	6	4,000	Completed
Simrall Corp.	Reed City Field	Temple Station	36	6	21,000	Completed
Mississippi						
Allied P. L. Co.	Tinsley Field	St. Elmo, Ill.	...	..	.....	Proposed
Oklahoma P. L. Co.	Tinsley Field	Baton Rouge, La.	...	10	.....	Proposed
Paluxy Asphalt Co.	Tinsley Field	Crupp	4	4	.....	Completed
Standard Oil Co. of N. J.	Tinsley Field	Baton Rouge, La.	175	10	Gas	Proposed

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The Oil Bank of America

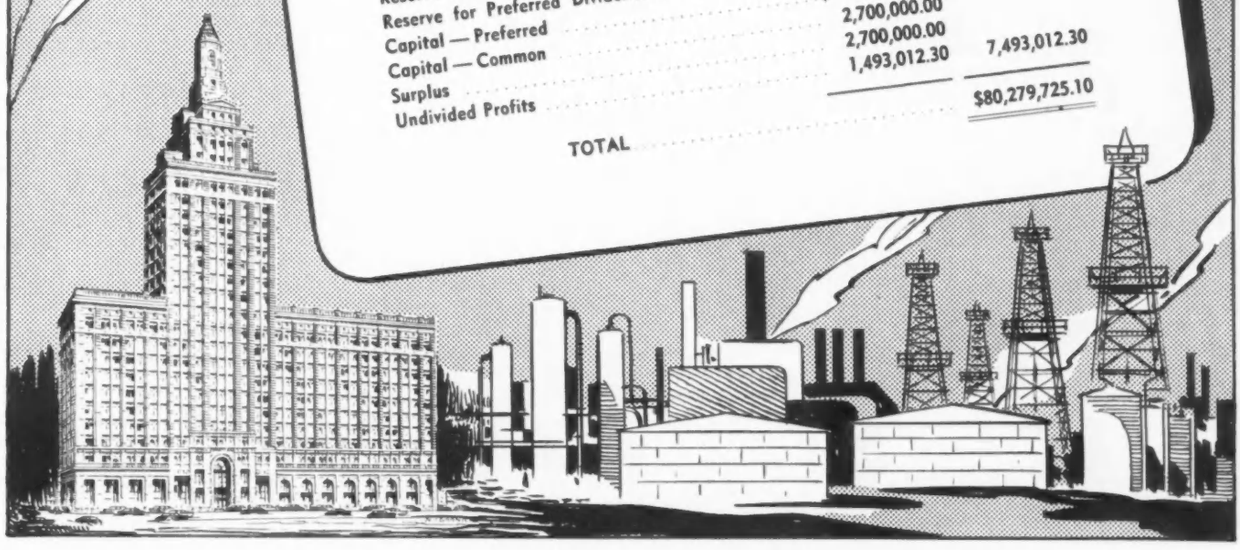
Statement of Condition December 31, 1941

RESOURCES

Cash and Due from Banks	$33,703,024.05	
U. S. Government Securities	16,093,669.03	
Other Bonds and Warrants	3,739,179.42	$53,535,872.50
Loans and Discounts		23,666,958.67
Overdrafts		13,629.50
Income Receivable Accrued		115,764.43
Stock in Federal Reserve Bank		180,000.00
Bank Premises		2,767,500.00
TOTAL		$80,279,725.10

LIABILITIES

Deposits		$72,612,572.89
Income Collected Not Earned		91,139.78
Reserve for Taxes, Interest, etc.		74,000.13
Reserve for Preferred Dividends		9,000.00
Capital — Preferred	$ 600,000.00	
Capital — Common	2,700,000.00	
Surplus	2,700,000.00	
Undivided Profits	1,493,012.30	7,493,012.30
TOTAL		$80,279,725.10



NATIONAL BANK OF TULSA

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

Important United States Pipe Line Construction in 1941

(Continued from Preceding Page)

(* Indicates Gasoline Lines)

Missouri

COMPANY	ORIGIN	TERMINUS	Length (Miles)	Diameter (Inches)	Capacity (Barrels)	Status
*Phillips Pet. Co.	Kansas State Line	Harrisonville	72	8	Loops	Completed
*Phillips Pet. Co.	Harrisonville	St. Louis	70	8	Loops	Proposed
Stanolind P. L. Co.	La Plata	Wood River, Ill.	165	12	24,000	Completed

Oklahoma

Anderson-Prichard Oil Corp.	Cement Field	Cyril	6	4	5,000	Completed
Cities Service Gas Co.	Cement Field	Oklahoma City	55	16	Gas	Completed
Gulf Refg. Co. (Loops)	Glenn Pool	Dublin, Ind.	203	10	Loops	Building
Magnolia P. L. Co (Loops)	Addington	Marlow	14	8	.....	Completed
Mid-Continent Pet. Corp.	New Tecumseh	Earlsboro	13	4	12,500	Completed
Oklahoma P. L. Co. (Loops)	Glenn Pool	DeQueen, Ark.	12	8	10,000	Completed
Oklahoma Natural Gas Co.	Oklahoma City	Oklahoma City	7	16	Gas	Completed
Pure Oil Co.	Cumberland Pool	Armstrong	16	6	20,000	Completed
Pure Oil Co.	Cumberland Pool	Fitts	43	6	10,000	Completed
Republic Natural Gas Co.	Texas County	Kansas State Line	6	4	Gas	Completed
Rock Island Refg. Co.	Cement Field	Knox	30	6	2,500	Completed
Texas Co.	Apache Pool	Rail Head	5	4	4,000	Completed
Texas P. L. Co.	Apache Pool	Seminole	101	8	30,000	Building

West Central Texas

Baird Refg. Co.	Novice	Hickman-Flores	26	4	4,000	Completed
Lone Star Gas Co.	Pottsville	Hamilton	15	6	Gas	Completed

Texas Panhandle

Natural Gas P. L. Co.	Borger (Loops)	Milwaukee, Wis.	531	20-24-26	Gas	Completed

West Texas

Coffield & Guthrie, Inc.	Northwest	Sharon Ridge	6	3	3,000	Completed
Crockett Gathering System	Soma-Noelke	Yates	7	3	2,500	Completed
Gulf Refg. Co., P. L. Div.	Midland	Ranger	26½	10	(Loops)	Completed
Gulf Refg. Co., P. L. Div.	Sand Hills	Crane Station	18	8	12,000	Completed
Gulf Refg. Co., P. L. Div.	Sand Hills	(Gathering)	5-23-6	8-4-2	.....	Completed
Magnolia P. L. Co.	Abell	.....	40	8	.....	Proposed
Magnolia P. L. Co.	Abell	(Gathering)	3-4	6-4	1,500	Completed
Richardson P. L. Co.	Slaughter	Wasson	44	6	5,000	Completed
Richardson P. L. Co.	Slaughter	(Gathering)	3	6	.....	Completed
Richardson P. L. Co.	Slaughter	(Gathering)	17	4	.....	Completed
Rio Gas & Power Co.	.....	Menard	8	2-4	Gas	Completed
Shasta P. L. Co.	Walker	Taylor-Line	8½	2	1,000	Completed
Shell P. L. Corp.	Big Springs	Westbrook	20	6	7,500	Completed
Stanolind P. L. Co.	Cedar Lake	(Gathering)	4.3	4	2,000	Completed
Stanolind P. L. Co.	Cedar Lake	(Discharge)	4	4	.....	Completed
Stanolind P. L. Co.	Slaughter	(Gathering)	.....	..	3,000	Completed
Texas-New Mexico P. L. Co.	Abell District	Crane	19	6	6,000	Completed
Texas-New Mexico P. L. Co.	Abell	(Gathering)	5-4	6-4	.....	Completed
Texas-New Mexico P. L. Co.	Slaughter	(Gathering)	17-14	6-4	10,000	Completed

East Texas

Etexas Prod. Gas Co.	Chapel Hill	Kilgore	14	6	Gas	Completed
Gulf Refg. Co.	Opelika	Big Sandy	37	4	Dist.	Completed
Humble P. L. Co.	Hawkins	Van Line	5½	6	.....	Completed
Humble P. L. Co.	Hawkins	(Loop)	5	6	.....	Completed
Roger Lacy	Hawkins	Gladewater	...	4	1,500	Building
Lone Star Gas Co.	Grapeland	Long Lake	20	12	Gas	Completed
Lone Star Gas Co.	Tri-Cities	Cayuga	3½	4	Gas	Completed
Magnolia P. L. Co.	Faulkner Station	.....	5.7	8	10,000	Completed
Sinclair Refg. Co.	Chapel Hill	Overton	10	4	4,000	Building
Southern Gas Co.	Willow Springs	Kilgore	8	4	Gas	Completed
The Texas P. L. Co.	Pleasant Grove	.....	1⅞	4	1,000	Completed

North Texas

Bell-Western P. L. Co.	Fargo Field	Granfield, Okla.	35	4	4,000	Completed
Bell-Western P. L. Co.	Fargo Field	(Gathering)	7¼	4-3	.....	.....
Continental P. L. Co.	Clay County	(Extension)	22	4	3,600	Completed
Lone Star Gas Co.	Sewell	Brad	27	12	Gas	Completed
Magnolia P. L. Co.	Asylum	Archer Co. Trunk	2½	2	500	Completed
Magnolia P. L. Co.	Scotland	Archer Co. Trunk	7	3-4	800	Completed
Shell P. L. Corp.	Antelope	Ryan, Oklahoma	40	8	.....	Proposed
Sinclair Refg. Co.	Anderson-Kerr	Walnut Bend Jct.	5.3	4	3,000	Completed
*Sinclair Refg. Co.	Ft. Worth	Dallas	30.85	3½	2,000	Completed
Sinclair Refg. Co.	Hoefle	Antelope, Jct.	5	3	2,400	Completed
Stanolind P. L. Co.	Electra	Devol, Okla.	15	8	12,000	Completed
Stanolind P. L. Co.	Muenster	Nocona	25	6	5,000	Completed
Stanolind P. L. Co.	Rogers Jct.	Whiting, Ind.	159	8-10-12	(Loops)	Completed
Stanolind P. L. Co.	Voth	Muenster	6	4	2,000	Completed

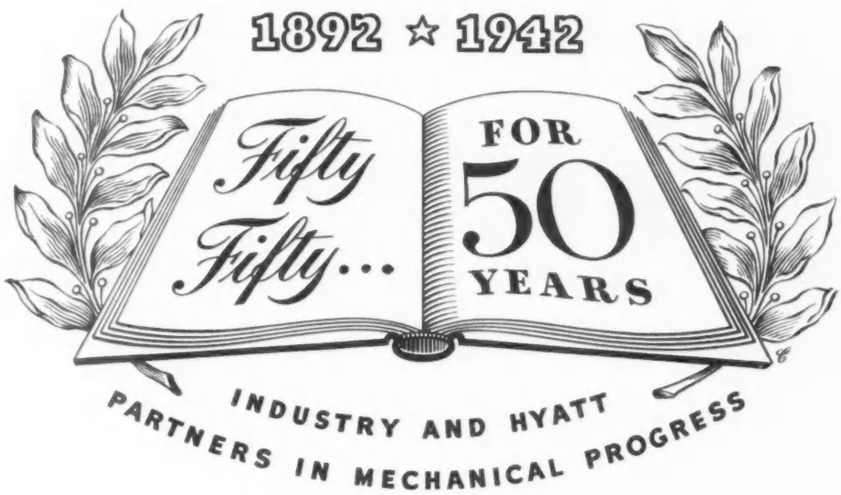
South Texas

Magnolia P. L. Co.	Sealy	Tomball	40	6-8	10,000	Completed
Magnolia P. L. Co.	Tilden Station	S. Campana	7	4	3,000	Completed
Magnolia P. L. Co.	La Gloria	Premont-Corpus Christi	63½	4-6	6,000	Completed
Magnolia P. L. Co.	West Ranch	Beaumont	190	14-16	Gas	Completed
Magnolia P. L. Co.	West Ranch	Maurbro Sector	6	4-6	5,000	Completed
Magnolia P. L. Co.	Jim Wells County	Corpus Christi	51½	6-8	10,000	Completed
Rincon P. L. Co.	Rincon Field	Brownsville	120	8	15,000	Completed
Sinclair Prairie Oil Co.	E. White Point	Corpus Christi	10	6	5,000	Completed
Southern Phillips P. L. Co.	Turkey Creek	Odem	6	4-6	5,000	Completed

Texas Gulf Coast

Atlantic P. L. Co.	Atreco	Port Arthur	8	10	.....	Building
City Industrial Gas Co.	Aldine	Houston	22.5	806	Gas	Completed
Dow Chemical Co.	Bay City	Freeport	42	8-10	Gas	Completed
Dow Chemical Co.	Angleton	Freeport	20	8	Gas	Completed
Housh & Thompson	Hardin	Hull	14	2½	Gas	Completed
Houston P. L. Co.	Genoa	Ellington Field	4	6	Gas	Completed
Humble Oil & Refg. Co.	Red Fish Reef	Cedar Bayou	20	6	Gas	Completed
G. H. McCarthy, Inc.	West Beaumont	Port Arthur	26	8	Gas	Completed
Magnolia P. L. Co.	Sealy	Tomball	40	8-6	10,000	Completed
Pan American P. L. Co.	Sabine	South Houston	190	10-12	60,000	Completed
Magnolia P. L. Co.	West Ranch	Beaumont	180	14-16	Gas	Completed
Palacios Gas Co.	Palacios	Camp Hulen	9	4	Gas	Completed
Stanolind P. L. Co.	Aldine	Houston	7.7	6	7,500	Completed
Texas P. L. Co.	Markham	Francitas	20	4½	8,000	Completed
United Gas P. L. Co.	Satsuma	Piney Point	6	6	Gas	Completed

THANKS, INDUSTRY!



WE'VE COME A LONG WAY TOGETHER during the past fifty years. We've helped America through emergencies . . . and through the greatest industrial era in her history. We've brought the advantages of anti-friction roller bearings to the many new and perplexing mechanisms of industrial pioneers. The accomplishments have been great, the rewards rich . . . for Industry, for Hyatt, for America!

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HYATT

QUIET ROLLER BEARINGS

Tanker Fleet

Building Program Speeded Following Pearl Harbor; U. S. to Have More Than Any Other Nation in 1943

By B. F. LINZ, Staff Writer

ORDERING full speed on the construction of tankers, the United States Maritime Commission is pushing forward with its program designed to develop an American-flag tanker fleet of 568 vessels within the next two years.

By the end of 1943, under the program laid down before the Japanese attack on Pearl Harbor precipitated war, a gross tonnage of between 5,00,000 and 5,500,000, less any losses that may occur, will be plowing the seas.

New oil carriers will come into service this year at a rate of 7 or 8 a month; the rate in 1943 will be even higher. Up to December 1, 1941, 26 tankers aggregating 249,661 gross tons were completed, and during the month of November alone 4 new vessels were launched.

Programmed pace of expansion of the tanker fleet went overboard with the Japanese attack. Construction of the ships will be speeded up by every possible means; new programs may be laid out to provide replacements for ships sunk by enemy action — several have been attacked in the Pacific so far—and the scheduled size of the fleet may be materially increased.

With diversions of tankers to British account, registrations under foreign flags during the period under the neutrality act, and sinkings of ships changing the picture frequently during the past year, detailed figures on our position today are lacking. Government officials in Washington are desirous that too-definite information not be released, lest it prove of value to the Axis powers.

But at the beginning of 1941, Maritime Commission figures show there were 361 tankers under the American flag, aggregating 2,596,458 gross tons. During the spring and summer a large number of these ships were diverted to the British "shuttle" service, but new vessels were being brought into service and at the end of September there were 366 ships of 2,648,852 gross tons, including those carrying oil for Britain.

As of May 1, last, the total registered American-flag tanker tonnage, including all tankers of 400 gross tons and over, was 4,604,000 deadweight tons, but not all of this was available for coastal or ocean carriage. From this total, for instance, there is indicated a deduction of over 300,000 tons for the movement of molasses and vegetable oils, Great Lakes shipping, harbor and inland movement, etc., and another 412,000 tons held by the government, as well as the tonnage devoted to the British service. With respect to the last, the actual number of ships diverted has not been disclosed, but 40 were returned during October and November and others are still being used.

Building 208 New Tankers

The present program of the Maritime Commission calls for the building of 208 new tankers; 146 will be for commission account, with a total gross tonnage of 1,620,000 tons and a carrying capacity of approximately 900,000,000 gallons, and 62, of about 614,500 gross tons, will be for private account.

The commission put its program into high gear last May, when it placed an order for 72 tankers with the Sun Shipbuilding and Dry Dock Company at Chester, Pennsylvania, the first keels being laid in July. Sun facilities were increased to the extent of 12 new building ways, and the commission added another 15 ships to its order, making it the largest ever placed with a single yard by the commission. Sun also is building 28 tankers for private account.

Another large group of ships was arranged for in October, when the commission awarded a contract for 36 vessels to the Alabama Dry Dock and Shipbuilding Company at Mobile, and another for 13 to Bethlehem Steel Company at Sparrows Point, Maryland. Keels for the first of these tankers were

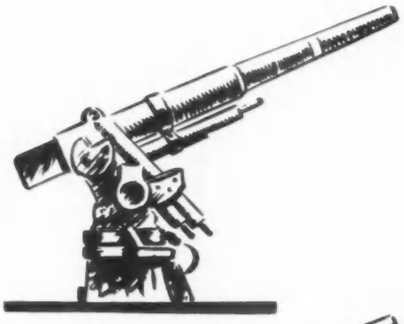
Water Movement of Petroleum From Gulf Coast to East Coast Ports

MONTH	Tanker Shipments		Barge Shipments
	1941	1940	1941
January	39,408,334	38,323,000	4,961,951
February	33,921,960	33,942,000	4,957,995
March	34,201,985	38,810,000	5,222,741
April	37,836,504	35,833,000	5,020,207
May	37,101,837	36,674,000	5,593,229
June	36,074,744	34,356,000	6,248,388
July	37,175,543	34,969,000	6,322,676
August	35,974,765	33,242,000	6,502,030
September	31,817,867	32,738,000	6,782,542
October	33,216,391	34,524,000	7,639,064
November	33,423,543	36,517,000	7,134,257
December	*35,000,000	38,393,000	*7,000,000
	425,153,473	428,321,000	73,385,080

* Estimated.

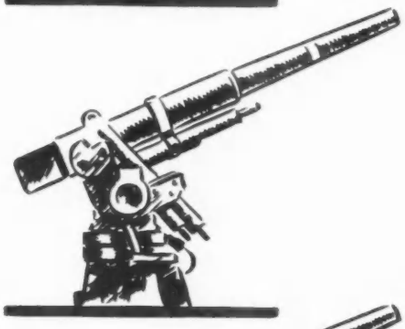
3 Gray LONG RANGE "Guns"

THAT SCORE HITS IN THE EMERGENCY



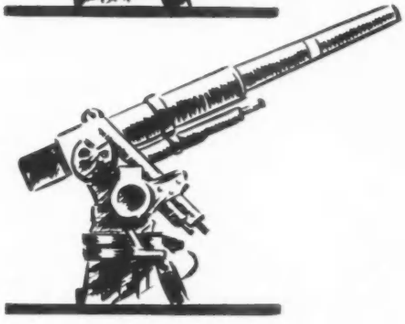
COMPOSITE MANIFOLD

In these days of all-out war production, Gray's long range planning and working to anticipate need, to assure control through all operations, is paying dividends in a manner not anticipated heretofore. The Gray Composite Manifold, a Christmas tree and flow line manifold all in one, weighs only 345 lbs., saves from 255 lbs. to 1155 lbs. of weight over the separate parts it replaces, conserves metal, manhours, and machine tools.



VALVE REMOVAL TOOL

The NEW Gray Valve Removal Tool makes salvaging of valves easy, safe and profitable in these days when valves are at a premium. This new tool can be used on all types of wells, regardless of pressure, because it utilizes equalized pressure. Inserting a 3½ lb. Gray Valve Removal Plug releases an unused valve weighing 101 to 176 lbs. for other use.



VALVE REINSTALLATION NIPPLES

This is no time for permitting any valves to loaf. The Gray Valve Reinstallation Nipples, designed for use on casing head outlets, releases an unused valve for other use. A 5 lb. nipple releases a valve weighing approximately 100 lbs., and permits reinstallation if and when required.

These are but three examples of the way Gray products are making a vital and substantial contribution to the oil drilling industry's program. Full details upon request.

GRAY

TOOL COMPANY

HOUSTON

West Coast Distributor: WAGNER-MOREHOUSE, INC., Los Angeles

laid last month, and deliveries will begin by next August.

First deliveries from the Sun yard are now about to be made.

In November, the commission signed contracts providing for the construction of 12 coastal tankers as part of its "small ship" program. These vessels will be 212 feet long, with a 37-foot beam and a 12-foot draft, with a cargo capacity of 12,660 barrels each, capable of passing from the Great Lakes to the ocean.

Included in the over-all construction program are 23 national-defense high-speed tankers, 15 of which already have been completed.

In addition to the tankers, the commission is experimenting with reinforced concrete barges, building 15 of them in 5-boat lots in yards on the Atlantic, Gulf and Pacific coasts. If successful, the number will be increased, possibly to 100.

Movement in Barges

Another branch of transportation, little publicized but of considerable importance, is operated by barges—more than 1000 of them of more than 2000 barrels capacity, not including those on the Pacific Coast.

The latest figures available, as of last May, show 68 steam and motor tank ships in ocean service, 19 on rivers and lakes, and 23 on inland Atlantic Coast service, and 97 non-motored barges in ocean, coastwise and Great Lakes service and 823 on inland service, the total of 1032 having a combined capacity estimated at between 5,500,000 and 7,500,000 barrels.

The number of barges is being increased rapidly, more than 25 being added to the fleet during the past seven months. Construction this year will depend largely upon the availability of materials.

The greatest movement of oil by barge is from Texas and Louisiana loading ports to Atlantic, Gulf and Mississippi River ports. The Louisiana movement by barges runs about twice as heavy as that from Texas. During the first 11 months of 1941, the barge movement from those two states increased from less than 5,000,000 barrels to well over 7,000,000 barrels a month.

The tanker movement from Texas runs well over 31,000,000 barrels a month; that from Louisiana averages something under 4,000,000 barrels.

Details of the tanker and barge traffic from Texas and Louisiana to various destinations from January through November (the latest month for which data is available) are shown in accompanying tables.

Aim of the Maritime Commission is to lift the United States out of the position of shipping inferiority occupied prior to the outbreak of the war in Europe in September, 1939. The more immediate objective is to provide a shipping capacity adequate to all needs of the current emergency.

Ships cannot be built overnight. Recognizing that basic fact, the commission began its construction program as soon as possible after the European situation indicated that the United States would eventually be involved. It began its shipbuilding early in 1940, it expanded its program early in 1941, it may expand it further in 1942 if the ship builders consistently turn out vessels ahead of schedule as they now are doing.

Under the combined programs of private interests and the government, there will be 568 tankers moving under the American flag in 1944, probably at least 100 more than England can count.

U. S. Foreign Trade

Increased Imports Nearly Equal To the Reduced Export Levels

IMPORTS of crude and petroleum products into the United States during the past three years, since the reduction of importation taxes, have nearly doubled in quantity; whereas the volume of exports has declined substantially due to the war making it impossible to ship to many large markets. Consequently, much of the United States' favorable international oil trade balance that has been enjoyed for years has practically disappeared.

A total of 93,549,000 barrels of crude oil and products was imported into the United States during 1941, which was but 12,360,000 barrels less than the 105,909,000 barrels exported. In 1938 the volume imported amounted to only 54,308,000 barrels, while exports totaled 193,728,000 barrels, which left a favorable balance of 139,420,000 barrels. This sharp restriction in international oil trade balance has been due to annual imports increasing 39,241,000 barrels since 1938, while exports have been decreasing 87,819,000 barrels.

A considerable portion of this change in trade exchange occurred during the past year, when imports rose almost 10,000,000 barrels and exports dropped nearly 25,000,000 barrels.

Both crude oil and refined product imports have been increasing in recent months and both have registered decreases in exports. The total of 49,834,000 barrels of crude oil brought into the United States during 1941 actually exceeded the volume of crude exported, which amounted to only 35,500,000 barrels. The change in refined product trade was less sharp, and the country still has a fairly favorable trade balance in this classification. However, an increase of 2,626,000 barrels during the past year brought refined imports up to 43,715,000 barrels, while an 8,561,000 barrels decline in exports dropped this figure to 70,409,000 barrels.

United States Foreign Oil Trade
(Thousands of Barrels)

YEAR	CRUDE OILS		REFINED OILS		TOTAL ALL OILS	
	Imports	Exports	Imports	Exports	Imports	Exports
1937	27,484	67,234	29,673	105,600	57,157	172,834
1938	26,412	77,254	27,896	116,474	54,308	193,728
1939	33,095	72,076	25,965	116,883	59,060	188,959
1940	42,662	51,496	41,089	78,970	83,751	130,466
1941 (est.)	49,834	35,500	43,715	70,409	93,549	105,909

Figures from American Petroleum Institute.

His ear can hear the soundless song of steel

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In collaboration with *Baldwin Southwark Division of The Baldwin Locomotive Works* and *General Electric Company,* Waugh Laboratories makes available a complete line of test instruments and machines for the determination and analysis of stresses, and for the testing of materials. Instruments and machines may be purchased outright or they may be rented from Waugh Laboratories for specific tests. Engineering field service and laboratory facilities will be furnished by Waugh Laboratories.

Information and literature describing specific facilities and their application to individual industries may be obtained by writing Nereus H. Roy, Director, at the address below.

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Natural Gas

Due to war preparation requirements 1942 consumption expected to outstrip all-time peak reached last year

By J. V. HIGHTOWER, Staff Writer

THANKS largely to the accelerating pace of national defense requirements and to widening applications of gas, the natural-gas industry in 1941 reached a new peak both in production and consumption—some 3 trillion cubic feet. The production increase was 14 percent over the 2,660,222,000 feet produced in 1940. Estimated total consumption was up about the same. It was a boom year, and there is every indication, according to gas authorities, that during 1942 production and consumption will materially outstrip last year's gains. One qualification to this view is that demand is likely to be adversely affected by the war's influence on certain industries using gas, but this probably will be more than offset by the boom in the essential industries and new pipe-line construction planned and in progress.

Lack of data prevents a thorough discussion of marketed production increases in the various states last year, but preliminary estimates indicate that 1941 production in Texas and Louisiana, which together produce about 60 percent of the nation's output, rose sharply. The increase in Texas, calculated on a 10-months basis, appears to have been around 10 percent, as compared with a rise of 9 percent in the 1939-1940 period. Production in Louisiana, on the basis of the first 9 months of 1941, was 29 percent higher than in 1940, whereas the rise in 1940 had been 17 percent over 1939. West Virginia production, to judge from a preliminary report from the state, failed to rise as sharply last year as it did during 1940, a reflection of dwindling reserves in the Appalachian region.

On the basis of estimated figures for consumption by classes of use in 1941, the industrial demand rose most markedly of all the classes, thanks to the large gain in industrial production created by the armament program. The American Gas Association estimates that the industrial demand last year, as figured in its system of industrial classification, rose 18.8 percent over the 1940 figure, an all-time record for that class of consumption. Natural gas used in electric-power generation also jumped 11 percent. Preliminary figures indicate that industrial consumption of natural gas, exclusive of that used in the fields, oil refineries, carbon black manufacture and power generation, was roughly 20 percent higher in 1941 than in 1940, compared to an increase of only 6 percent in the 1939-1940 period.

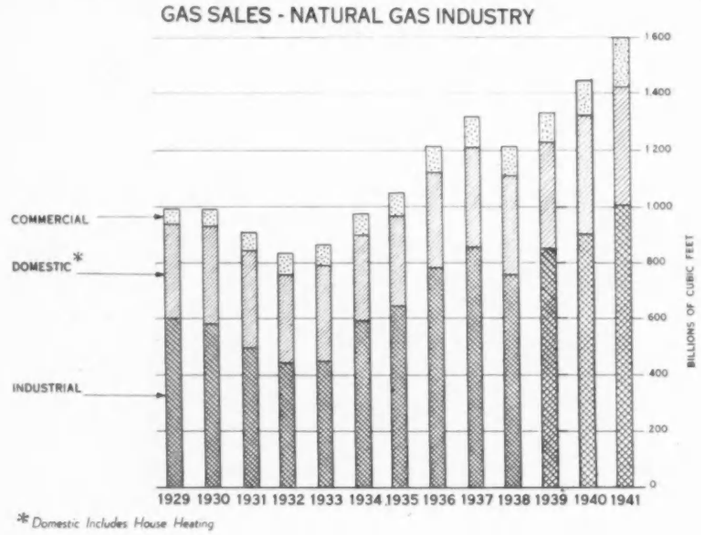
Natural gas consumption in oil refineries is considered to have

Preliminary Data on Marketing of Natural Gas in 1941, by American Gas Association

These data embrace principal marketing of natural gas to users outside the petroleum and carbon black industries, but do not include the extensive use in the oil fields, at oil refineries, and in carbon black manufacture, for which see other tables published herewith.

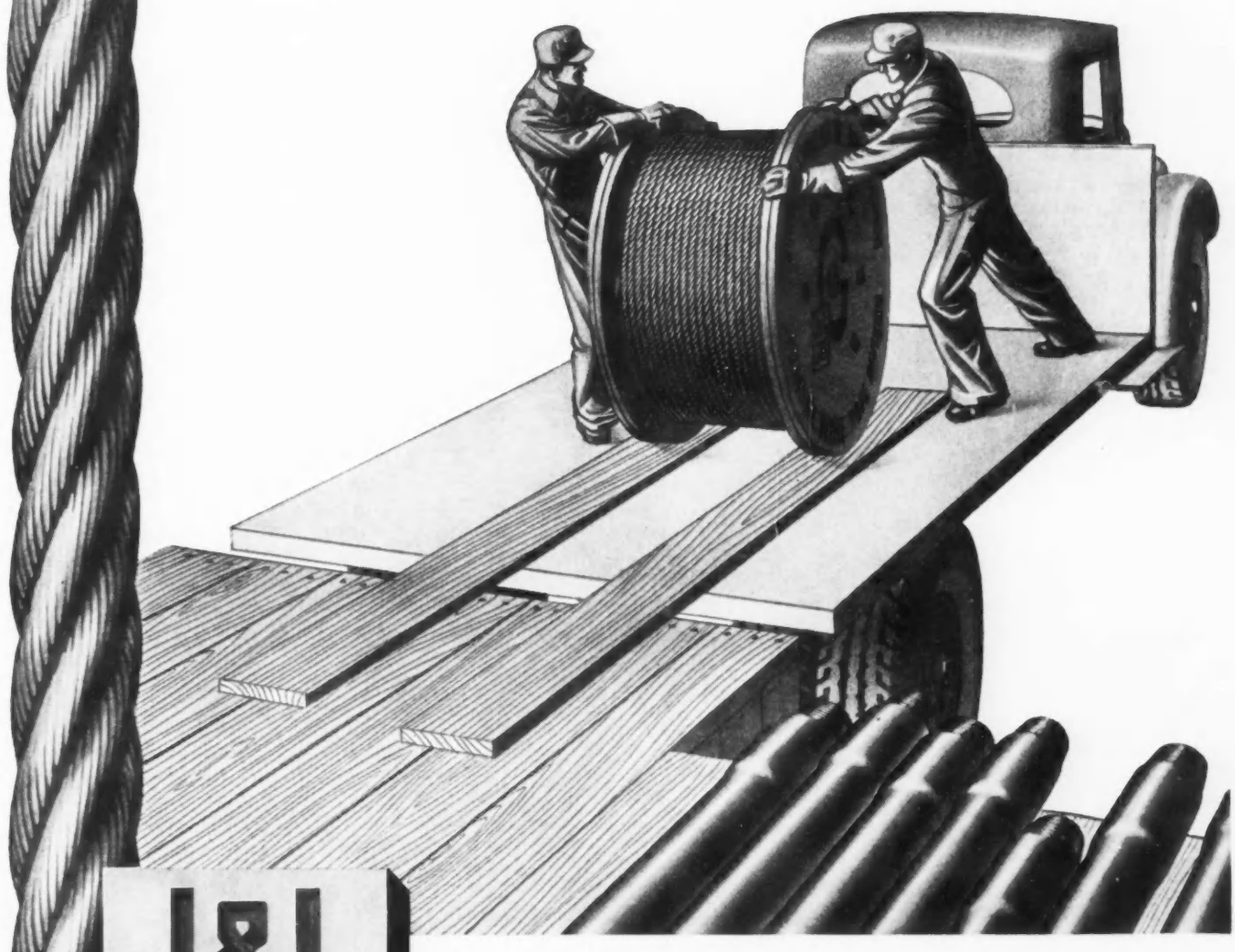
	1941	1940	Percent Change
Customers:			
*Domestic	7,565,000	7,212,000	+ 4.9
Commercial	574,000	565,000	+ 1.6
Industrial	49,000	47,000	+ 4.3
Total	8,188,000†	7,824,000	+ 4.7
Gas Sales (MCF):			
*Domestic	417,216,000	419,532,000	— 0.6
Commercial	127,975,000	122,544,000	+ 4.4
Industrial	851,635,000	716,668,000	+18.8†
Electrical Generation	203,510,000	182,948,000	+11.2
Total Industrial & Electrical Gen.	1,055,145,000	899,616,000	+17.3
Total	1,600,336,000†	1,441,692,000	+11.0
Revenue (Dollars):			
*Domestic	$280,971,000	$283,017,000	— 0.7
Commerical	57,083,000	55,923,000	+ 2.1
Industrial & Electrical Generation	183,999,000	153,777,000	+19.7
Total	$522,053,000*	$492,717,000	+ 6.0

* Including house heating.
† All-time record.



* Domestic Includes House Heating

You get long hard service—
money-saving service—when you specify
J&L Permaset
PRE-FORMED
WIRE ROPE



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risen last year. This would be expected in those plants burning natural gas, since the total crude throughput of American refineries last year appreciably increased. A further factor tending to increase the use of gas in refineries is the growing utilization as gasoline raw materials of some portions of cracked gases produced in the refineries and formerly burned as fuel. Although complete data on the total production of polymer gasolines and alkylates last year are not at hand, production unquestionably rose sharply over the 1940 figure. This would mean, in those refineries using natural gas and beginning to use part of their cracked gases as raw materials, the consumption of natural gas would necessarily increase, assuming no reduction in crude throughput.

A slight drop probably developed in natural gas consumed in domestic services last year. This assumption is made on the basis of the American Gas Association's estimate that there was a 0.6 percent decrease in domestic use of natural gas. A mild winter is considered to have played a part in this change. Use of natural gas for cooking is on the upgrade. The Association of Gas Appliance and Equipment Manufacturers report that 2,400,000 gas ranges were sold in 1941, the highest record in the history of the industry and an increase of 38 percent over 1940 sales. Natural gas, of course, stands to profit by this rising use of gas for cooking. About 750,000 automatic gas water heaters were sold during 1941. Furnace, boiler, and conversion burner sales increased more than 50 percent. Gas refrigerator sales set new records in many localities prior to production restrictions on all automatic refrigerators. With respect to commercial consumption of natural gas, A. G. A. estimates indicate that this class of consumption rose by slightly over 4 percent in 1941.

The outlook for the natural gas industry this year is conditioned by many favorable and some unfavorable factors. Production, of course, will be governed by demand, and there is every prospect that demand will increase. An official closely connected with gas developments recently completed a survey of the industry and looks for a material increase in natural-gas consumption this year over the 3 trillion of 1941. He considers that gas companies are, on the whole, optimistic over the outlook. The utilities are confronted with rising labor costs, higher taxes, and the prospect of decreased gas consumption in some industries temporarily handicapped by demands of the war. On the other hand, demands from the armament industry and from military establishments located all over the country are expected to overcome such handicaps. Construction of additional pipe lines, this authority considers, is a virtual certainty and will be assisted by high preference ratings for materials. Some gas companies have already about reached peak capacity in their transmission lines and are installing equipment to raise the operating pressures to increase throughout.

Expansion of munitions and shipping industries is certain to place heavy demands on natural gas this year. Natural gas is already being widely used for heat treatment of metals, where it has an advantage because of the close temperature control possible with its use. This gas will be used in great quantities in the anhydrous ammonia plants under construction and planned. Hydrogen is to be obtained from the gas by cracking processes and combined with atmospheric nitrogen to produce ammonia, basic ingredient of many explosives.

In War Industry

In a recently released statement, American Gas Association commented in some detail on the application of new large-scale heating processes and methods to instruments of warfare, for making certain the superlative equipment demanded by the Army, Navy, and Air Corps. In a modern tank, for example, gas is used for about 15 different heating operations in hardening the armor plate, which must be hard enough on its outer surface to offset artillery fire and sufficiently tough and resilient on its inner surface to prevent shattering. Whereas making this product in the last war would have required a heating cycle of 400 to 600 hours, a superior result now is possible in about 100 hours.

In the shipyards now are gas-operated furnaces ranging in size from that of a shoe box, for soldering and rivet heating, up to the size of a 5-room house, for the annealing of a complete gun turret 50 feet in diameter, weighing 40 tons and operating at 1200-degree temperature. This operation extends over a period of hours and uses more than a million cubic feet of gas for each anneal. Furnaces of this type are the largest in the world, and when not in use for annealing, they are equipped with gas-fired unit heaters and used as a shop.

In numerous other operations in the war program, also, gas-using equipment is successfully meeting the demands for large production without sacrifice of quality, this equipment ranging from giant open-hearth and reheat furnaces in the steel mills to the tiny torches used in making delicate instruments for bombers. Some of the many operations in which gas fuel is used to implement and accelerate the war effort include the following: the hardening and drawing of projectiles and gun barrels, anneal-

United States Consumption of Natural Gas, by Classes, 1937-1941

Bureau of Mines data except for 1941, latter year being estimated, as explained in note at bottom of table.

(Millions of Cubic Feet)

CLASS	1937	1938	1939	1940	1941
Domestic	371,884	367,772	391,153	443,646	440,000
Commercial	117,390	114,296	118,334	134,644	140,000
Field Use	651,320	659,203	680,884	711,861	750,000
Carbon Black	341,085	324,950	347,270	368,802	390,000
Oil Refineries	113,005	109,741	97,685	128,007	140,000
Electric Power	170,567	169,988	191,131	183,156	200,000
Other Industry	650,274	559,298	659,180	700,063	850,000
Total	2,415,485	2,305,248	2,485,637	2,670,179	2,910,000

NOTE ON ESTIMATES FOR 1941

Domestic and commercial consumption figures increased over those for 1940 by about same percentages estimated by American Gas Association for 1941. The AGA data do not include those companies marketing both natural and artificial gas.

Data for field consumption for 1941: percent increase 1941 over 1940 assumed same as percent increase 1940 over 1939.

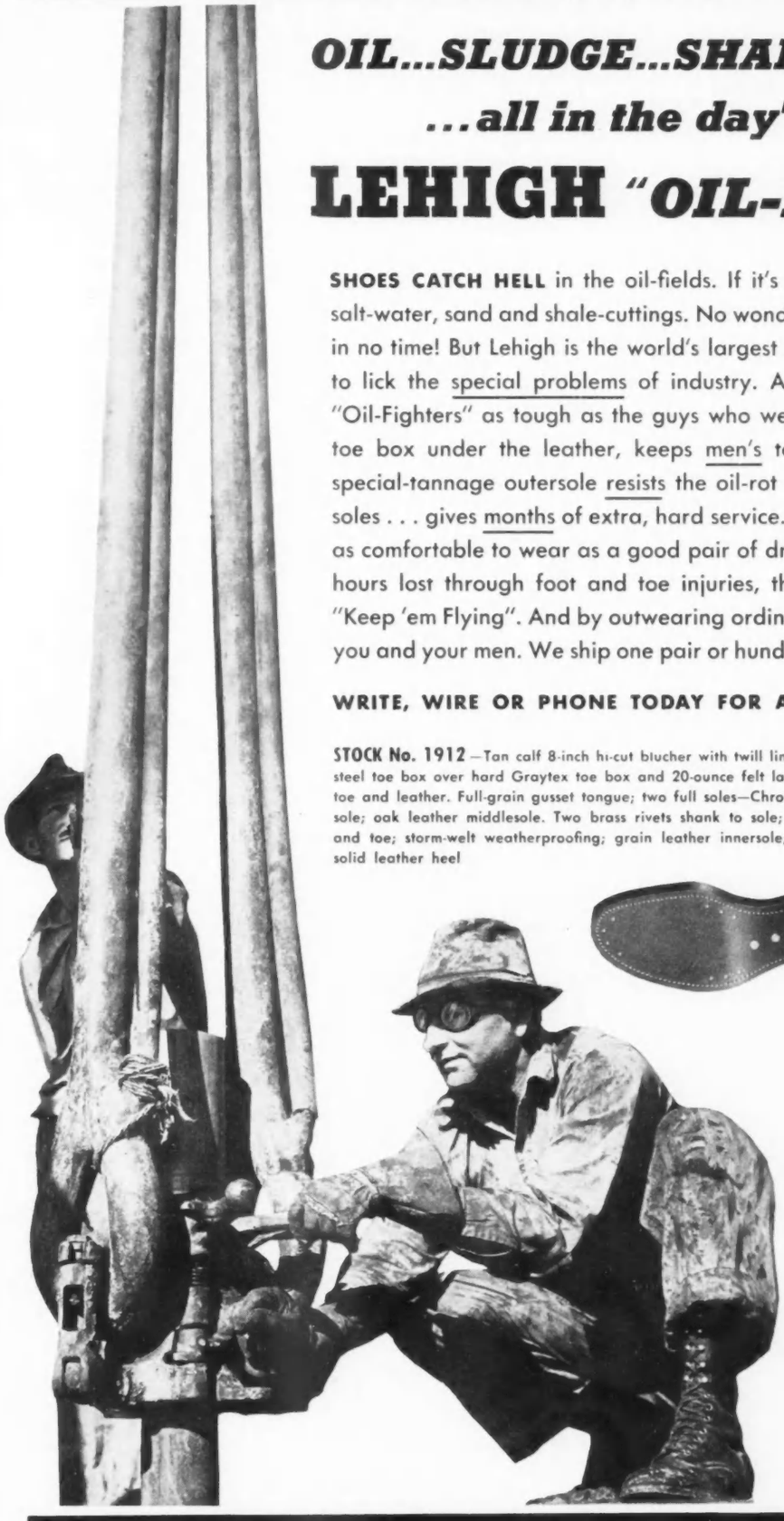
Data for carbon black: same method of estimation as for field consumption.

Refinery consumption 1941 based on 1940 data increased by ratio of refinery throughput in 1941 to throughput in 1940.

Power utility consumption increase in 1941 assumed same as the present increase for 1941 estimated by American Gas Association.

"Other industry" consumption for 1941 based on percent increase for "other industry" made by American Gas Association, but slightly higher.

OIL...SLUDGE...SHALE CUTTINGS
...all in the day's work to
LEHIGH "OIL-FIGHTERS"



SHOES CATCH HELL in the oil-fields. If it's not oil, grease or sludge, it's salt-water, sand and shale-cuttings. No wonder ordinary shoes go to pieces in no time! But Lehigh is the world's largest maker of special safety shoes to lick the special problems of industry. And we've built these brawny "Oil-Fighters" as tough as the guys who wear them. An armorplate-steel toe box under the leather, keeps men's toes safe from harm. A new, special-tannage outersole resists the oil-rot that quickly crumbles regular soles . . . gives months of extra, hard service. And for all their beef, they're as comfortable to wear as a good pair of dress shoes! By conserving man-hours lost through foot and toe injuries, these husky shoes help you to "Keep 'em Flying". And by outwearing ordinary shoes they save dollars for you and your men. We ship one pair or hundreds, as fast as you need them.

WRITE, WIRE OR PHONE TODAY FOR ALL THE FACTS AND PRICES

STOCK No. 1912—Tan calf 8-inch hi-cut blucher with twill lining. Austempered steel toe box over hard Graytex toe box and 20-ounce felt layer between steel toe and leather. Full-grain gusset tongue; two full soles—Chrotan leather outersole; oak leather middlesole. Two brass rivets shank to sole; reinforced shank and toe; storm-welt weatherproofing; grain leather innersole; leather counter; solid leather heel

STOCK No. 1914—Dark brown Eskimo calf 8-inch hi-cut blucher with twill-lined forepart. Same inner construction as stock No. 1912 above except 13-nailed rubber heel.

LEHIGH SAFETY SHOE CO., Inc. *Allentown, Pa.*

ing cartridge cases, stress-relieving gun turrets, forging aluminum airplane propellers, carburizing engine parts, melting glass for the manufacture of optical range finders, heat-treating horseshoe nails for the cavalry, manufacture of textiles for the armed forces, and the making of silk cloth for parachutes.

In army camps, projects, and commercial establishments serving soldiers and defense workers, gas is being used in rapidly increasing amounts for cooking, water heating, space heating, and sterilizing, as mobilization proceeds.

Gasoline

Production of aviation gasoline also will require greater use of natural gas this year. Isobutane derived from the gas processed in natural gasoline plants is an essential ingredient of aviation gasoline, production of which is scheduled for a three-fold expansion this year. Normal butane, likewise present in natural gas, may also be used in making aviation gasoline. Normal butane, by dehydrogenation, is converted into butylene, which can be polymerized and then hydrogenated to give high-octane hydrocodimer, which is one of the blending agents in aviation fuel.

The spreading use of gas reversion processes in the refining industry offers another outlet for constituents of natural gas, specifically propane and butane. These two constituents may be fractionated from natural gas and combined with cracking operations to produce high-octane motor gasoline. This is being done commercially.

Natural gas is likely to replace, to some extent, refinery cracked gases formerly used as fuel because of the growing use of portions of such gases as raw materials to make gasolines. Polymerization and alkylation are cutting into the supply of refinery gases. F. S. Kelly, Jr., of the Arkansas-Louisiana Gas Company, in a paper before the Industrial and Commercial Section of the American Gas Association meeting at Dallas last May said that in one instance, as the result of installation of polymerization equipment in a refinery, the available cracked gas supply was reduced by 30 percent.

Production of gas in the Southwest late this year or early next year is very likely to increase. In the Appalachian region, the war industries must have more gas than the area can produce. The drilling campaign of the last few years has failed to make new production keep pace with depletion of the reserves. Hope Natural Gas Company plans to construct a 772-mile pipe line this year from the Monroe field of Louisiana to West Virginia.

Wisconsin, badly in need of natural gas in the face of heavy demands on the manufactured gas industry, may get natural gas from the Southwest this year if legal obstacles do not develop. In January, 1942, the Wisconsin Public Service Commission issued a certificate of convenience and necessity to Wisconsin Gas Transmission Company for construction of a natural gas pipe into the state. In the course of hearings before the Wisconsin Public Service Commission last year, gas utility companies testified that unless natural gas were brought into the state, it would be necessary to expand equipment for making manufactured gas in order to meet growing demands. Gas would be brought into Wisconsin from the Texas Panhandle by Wisconsin Gas Transmission Company.

Wider use of the sour gas produced in the fields of South Arkansas is indicated by construction of war industries in that state such as aluminum and synthetic ammonia manufacture. The presence of large quantities of sulphur in the gas has discouraged its utilization, but desulphurization plants already in successful operation in some of the fields have shown the practicability of sweetening the gas if sufficient demand develops.

Increasing quantities of natural gas will be used in the Gulf Coast states this year. The Alabama steel industry, electric-power plants operating and under construction, shipyards, and widely scattered and growing military camps have called for expansion of gas transmission lines, such as that built by Southern Natural Gas Company from the Logansport field to Monroe, Louisiana, to tie in with the company's trunk line to Birmingham, and United Gas Pipe Line Company's line from the Lirette field in Louisiana to Mobile.

Marketed Production of Natural Gas in the United States, by States, 1937-1941

Bureau of Mines data except for 1941; 1941 partly estimated, as explained below.

(Millions of Cubic Feet)

STATE	1937	1938	1939	1940	1941
Arkansas	9,690	11,301	10,107	14,379	15,800[B]
California	329,769	315,168	348,361	351,950	363,000[B]
Colorado	3,186	1,904	2,015	2,533	
Illinois	1,040	1,169	2,746	8,359	
Indiana	1,551	1,299	791	1,137	
Kansas	83,890	75,203	80,556	90,003	100,800[B]
Kentucky	55,719	46,163	47,771	53,056	
Louisiana	315,301	283,899	294,370	343,191	442,000[C]
Michigan	9,080	10,165	10,726	12,648	
Mississippi	13,348	13,656	14,527	6,365	3,880[D]
Missouri	444	1,369	538	310	
Montana	24,765	21,216	23,178	26,231	
New Mexico	46,337	50,706	60,284	63,990	
New York	21,325	39,402	29,222	12,187	
Ohio	42,783	35,257	36,469	40,639	
Oklahoma	296,260	263,164	250,875	257,626	
Pennsylvania	115,928	76,547	93,882	90,725	
South Dakota	10	10	10	9	
Tennessee	17	6	8	9	
Texas	854,561	882,473	979,427	1,063,538	1,160,000[E]
West Virginia	149,084	134,342	159,226	188,751	200,000 plus
Wyoming	31,023	26,678	26,614	27,346	30,000 approx.
Others	2,509	4,465	5,053	5,240	724,820[B]
Total	2,407,620	2,295,562	2,476,756	2,660,222	3,040,300[B]

Footnotes: [B] Estimated. "Others," for 1941 include Oklahoma production.
[C] State government data based on first nine months.
[D] State government data.
[E] State government based on first ten months.

NOTE ON ESTIMATES FOR 1941

Total United States production for 1941 estimated by multiplying production in 1940 by ratio of natural gasoline production in 1941 to natural gasoline production in 1940, the same method used by American Gas Association in arriving at round figure of 3 trillion cubic feet in published data. This method sometimes results in considerable error but is probably the best way to reach an estimate without actual statistics, which are available only in a few states and included in the table.

Those state figures shown for 1941 and footnoted "b" were reached by applying to state production data for 1940 the ratio method applied to United States production as explained above. Natural gasoline production figures for 1941 were available only for Arkansas, California, Kansas, and Texas.

Production for "others" in 1941 estimated as the difference between estimated total United States production and sum of estimated and actually reported data for the individual states shown.

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OIL MEN *are busy men*

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3301 BUFFALO DRIVE **HOUSTON, TEXAS, U. S. A.**

Washington Roundup

OPM liquidated but functions transferred to new board . . . P-98 countersignature provision to be amended . . . Extend P-98 to foreign operators . . . Henderson tries to clarify price control . . . Tanker, aviation and rubber shortage studied by OPC

By B. F. LINZ, Washington Correspondent

A SORELY needed amendment to Priorities Rating Order P-98, which would eliminate the necessity of securing the countersignature of the OPC field office chief to priority applications, was in the mill at the end of the week, with its issuance imminent. First of an expected series of several revisions, the amendment was seen as removing one of the chief stumbling blocks to quick action to secure needed repairs and replacements, but industry representatives continued vocal in their opposition to the M-68 and P-98 orders, contending that under them the number of new wells brought in would be only a fraction of the 30,000 said by Coordinator Ickes to be necessary.

Biggest "national" story of the week was the long-expected shakeup of the defense organization, with OPM liquidated and its functions transferred to the new War Production Board of which Donald Nelson will be the czar. So far, the change has made no difference in the activities of the groups which handle problems of the oil industry, but a further streamlining of the organization is in prospect which may simplify the present highly complicated machinery for the handling of conservation orders and priority applications.

Of more eminent importance was the admission by OPC that the tanker situation on both the Atlantic and Pacific coasts is becoming serious and a plea by the coordinator for greater use of rail facilities.

Added point was given the request by an OPA order permitting a fractional increase in the price of gasoline in 15 Eastern and Southern states, carrying out a promise of Ickes and Henderson to compensate the companies for the higher costs incurred in the use of tank cars.

The order came a few days after Henderson had issued a clarification of his request that oil prices be maintained at their November 7 level and threatened to impose a ceiling on filling stations if they raised gasoline prices.

The freezing of oil prices by Henderson will be given full authority of law with the enactment of price-control legislation now in its final stage in Congress, which automatically will make previously issued ceiling orders effective under the new law.

Reorganization

A general shake-up of the defense organization, ordered by Donald M. Nelson as almost his first step as chairman of the new War Production Board, killed the Office of Production Management and reshuffled its various divisions into a new setup, result of which may be a quicker and more realistic handling of the war-created problems of the oil and other industries.

Most important unit of the new organization will be a Division of Industry Operations, which absorbs the priorities division of OPM and will be in complete charge of the conversion of industry to war production.

Also created were a Requirements Committee to handle the allocation of all raw materials for the Army, Navy, lease-lend administration, Maritime Commission and civilians; and a planning division to look ahead to war production problems and post-war economy measures.

A production division is set up, in which will be incorporated the contract distribution work of OPM; the civilian supply division will be continued, and Price Administrator Leon Henderson was placed at its head; Henderson will handle both organizations, which originally were one.

With the elimination of the Office of Production Management, the various OPM divisions will be incorporated in the War Production Board.

To Amend P-98

First defect in Preference Rating Order P-98 to come to light is the provision depriving operators of the privilege of using Preference Rating Order P-100 to get quick action in the case of a breakdown.

Particularly affected by this provision, it was said, will be stripper-well operators whose pumps go out of commission because of a breakdown of cups or some other minor part.

Under the requirements of P-98, the operator not only must make application to OPC in Washington but must obtain the countersignature of the director of the OPC district office upon his purchase order which, in the case of an operator in Oklahoma, means sending or taking the order to Chicago.

Ordinarily, in the case of cup failure, an operator has been able to go to the nearest supply house and secure replacements and the pump can be put back in working condition in a few hours. Under the P-98 setup, it is complained, several days may be required to comply with the formalities, during which time water may lay on top of the oil and possibly ruin the well.

OPC officials concerned with production said they were aware that a number of such situations might arise under the regulations

Text of Preference Rating Order P-98-a

OFFICE OF PRODUCTION MANAGEMENT

PRIORITIES DIVISION

PRODUCTION, TRANSPORTATION, REFINING AND MARKETING OF PETROLEUM

PREFERENCE RATING ORDER NO. P-98-a

To:
Address:
Operator's Serial No. Date:

PREFERENCE RATING ORDER.

For the purpose of facilitating the acquisition of Material for the Production, Refining, Transportation and Marketing of Petroleum, to be carried on by the Operator outside the United States, preference ratings are hereby assigned to the deliveries of necessary Material on the terms hereinafter set forth

(a) **Definitions.**

(1) "Operator" means the Person to whom this Order is addressed above.

(2) "Supplier" means the Person with whom a contract or purchase order has been placed for delivery of Material to the Operator.

(b) **Assignment of Preference Ratings.** Subject to the provisions of paragraph (c) and of any Conservation Order issued by the Director of Priorities, the Operator and his Suppliers are hereby authorized to apply the preference ratings assigned by Preference Rating Order P-98 to deliveries of Material to be used by the Operator for the Production, Refining, Transportation or Marketing of Petroleum outside of the limits of the United States: **Provided,** however, that the Operator may apply the preference ratings only to the delivery of those kinds and quantities of Materials which are authorized on the copy of OPC Form 165424, or other approved form which has been returned to the Operator by the Office of Petroleum Coordinator.

(c) **Application Preference Rating.**

(1) The Operator, in order to apply the preference ratings hereby assigned, shall comply with all the provisions of Preference Rating Order No. P-98, except that

(I) before he may apply a preference rating hereby assigned he must serve a copy of this Order upon each Supplier with whom he places a contract or purchase order for delivery of material to which he elects to apply a preference rating; and

(II) in place of the countersignature of the Director in Charge of the nearest District Office of the Office of Petroleum Coordinator required by Paragraph (e) (3) of Preference Rating Order No. P-98, the Operator shall include in the endorsement the Serial Number of this Order.

(2) Any Supplier on whom a copy of this Order has been served and with whom purchase orders and contracts are placed to which a preference rating has been applied pursuant to the provisions of this Order may in turn apply the preference ratings to deliveries to him as though such preference ratings were applied pursuant to the provisions of Preference Rating Order P-98, in the manner provided in that Order.

(d) **Applicability of Other Orders and Regulations of the Director of Priorities.**

(1) Except as specifically provided in paragraph (c) (1) (II), the Operator and his Suppliers shall be subject to all the restrictions and provisions of Preference Rating Order No. P-98.

(2) The Operator and his Suppliers shall also be subject to all the provisions of any Conservation Order, including expressly all Conservation Orders in the M-68 series, which may be issued from time to time by the Director of Priorities.

(3) This Order and all transactions affected hereby are subject to the provisions of Priorities Regulation No. 1, as amended from time to time, except to the extent that any provisions of this Order may be inconsistent therewith, in which case such provision shall govern.

(e) **Communications to Office of Petroleum Coordinator.** All reports which may be required to be filed hereunder, and all communications concerning this Order, shall, unless otherwise directed, be addressed to "Office of Petroleum Coordinator, Washington, D. C. Ref: P-98-a."

(f) **Effective Date.** This Order shall take effect immediately and shall continue in effect until revoked by the Director of Priorities.

(P.D. Reg. 1 Amended, Dec. 23, 1941, 6 F.R. 6680; O.P.M Reg. 3 amended, Sept. 2, 1941, 6 F.R. 4865; E.O. 8629, Jan. 7, 1941, 6 F.R. 191; E.O. 8875, Aug. 28, 1941, 6 F.R. 4483; sec. 2(a), Public No. 671, 76th Congress, Third Session, as amended by Public No. 89, 77th Congress First Session.)

Issued this 21st day of January, 1942.

(Signed) J. S. Knowlson
J. S. Knowlson
Acting Director of Priorities

and that they already had asked OPM to give consideration to a revision which would eliminate such difficulties. They stressed that the government's interest lay in keeping oil flowing and that procedure was a secondary matter, and expressed confidence that changes would be made in the order which will offer safeguards to the operators.

Foreign Priority Order

Priority ratings assigned by P-98 were extended to firms operating outside the limits of the continental United States January 21 by an extension of the order announced by OPM shortly before it was taken into the War Productions Board under Donald Nelson.

Preference Rating Order P-98-a was issued to extend the coverage of P-98 to concerns outside the 48 states, "when specifically authorized by the Office of Petroleum Coordinator."

It was explained that an operator wishing to use preference ratings under the order must make application to OPC and receive authorization specifying the kinds and quantities of materials to obtain which the assigned ratings may be used.

When the authorization is granted, the operator is to serve a copy of the order with the serial number assigned to him upon each of his suppliers, and the rating then may be applied and may be extended by the supplier by endorsement in accordance with the provisions of P-98. However, the countersignature of the district representative of OPC is not required on orders which bear preference ratings under P-98-a, but in all other respects operators and suppliers are subject to all restrictions and provisions of the original order.

Form

A radically simplified version of PD-200 — application for project rating—has been adopted by the priorities division of OPM, in which the "paper" work of applicants has been cut by a reduction from seven to two pages.

PD-200 is the form for projecting rating applications authorized under P-19A, permitting an applicant to make use of one desired preference rating for materials from two or more suppliers, in contrast to PD-1 which is for material from only one supply house.

The form is used by operators

wishing to make extended repairs, construct new pipe lines, build new refineries, or undertake any project requiring new material from several suppliers.

Rubber

Further restrictions on the use of rubber have been ordered by the War Production Board, to become effective February 1, designated to curtail the production of non-essential goods in order that more material may be made available for more necessary purposes.

The order limits the amount of rubber to be made available for many purposes, other than for the filling of war orders, to specified percentages of the average monthly consumption during the 12 months ended March 31, 1941.

In a lengthy list of products for which rubber will be made available in varying amounts, the board disclosed that consumption for the manufacture of rotary drillers' oil suction and discharge hose and certain other types of heavy industry hose will be permitted to reach 140 percent of consumption during the base period, while tank wagon hose will be limited to 100 percent.

Prices

In a long letter, intended, he said, to "clarify all points which have arisen since OPA announced that prices prevailing November 7, 1941, shall be considered maximum prices," Price Administrator Leon Henderson on January 19 amplified his previous statements that no increases would be countenanced until after completion of studies which have been going on since last July without in any way retreating from that position.

A puzzling feature of the letter was the shifting of the maximum for crude prices from the originally announced November 7 level to that of October 1.

No explanation was given of this change in the letter, which went to producers, refiners, marketers and others who buy or sell oil or specified petroleum products, since crude prices were the same on both dates, but there was a belief in oil circles that the earlier date was adopted because October 1-15 will be the base period for price ceilings to be established under the new price-control legislation.

It was admitted, however, that this explanation did not explain why prices for products were left at the November 7 level.

OPA officials explained that the letter of January 19 was designed to "supersede and clarify" letters of November 7, 10 and 28, 1941, the first of which was the original "freezing" order.

At the same time, it became known that industry representatives had asked Henderson flatly how he expected to keep alive the search for new reserves if he continued to keep prices at a level which made discovery operations highly unprofitable.

Henderson made it clear that his "clarification" of the situation "does not mean that the prices of petroleum and petroleum products which prevailed on November 7, 1941, have received the approval of this office."

Such approval or disapproval, he said, must "necessarily" await the investigations now being made by OPA into crude production, refining, marketing and other costs and prices. That investigation has been going on since last July, when Phillips Petroleum Company unsuccessfully sought to increase its posted prices.

Spot and contract transactions for oil and its products are required to be at prices effective November 7, last, except that if there is a difference between a scheduled price and a regularly posted or quoted price, the lower of the two shall be the maximum price.

The maximum price for crude-oil purchases, however, "shall be considered to be the posted or prevailing purchase price as of October 1, 1941, except where revisions have been approved by this office. No premiums or other special allowances tending to increase the posted or prevailing price shall be paid without the approval of this office."

Prices covered by the "freezing" order include all domestic, export and import transactions, sales, transfers, exchanges or purchases of oil and products involving contract, bid or spot sales, of the following nature: crude, field or well, gathering point, tank farm and terminal; products, cargo, harbor, barge, refinery, terminal, tank car and tank wagon.

Incorporated in the letter were detailed instructions to be followed in making applications for permission to increase prices because of increased cost, with an appendix showing the type of data to be submitted.

By the end of the week, queries regarding the exact meaning of the letter were coming into OPA, leading to the issuance on Friday of an explanatory note on the statement under "price basis" of the sentence: "Whenever prices are fixed or approved by this office, such prices shall be considered the maximum prices for purposes of compliance with this request." Elaborating on that statement, OPA explanation said it "refers to maximum prices approved or established by this office either prior or subsequent to November 7" and "includes all maximum prices which the industry has been requested to maintain by letter or formal ceiling order and should be strictly adhered to by the industry."

Fuel Oils Frozen

Prices for Bunker C and No. 6 grade fuel oil at East Coast and Gulf ports were frozen by the Office of Price Administration January 20 at levels effective January 9, formalizing the refusal of OPA on that date to permit large companies to raise their quotations.

The ceiling schedule fixes the maximum price, f.o.b. refineries and terminals (ex lighterage) at 85 cents per barrel at Gulf Coast ports other than Tampa; $1.25 at Tampa; $1.30 at Jacksonville, Savannah and Charleston; $1.35 at Providence, Boston, Portland, Maine; Norfolk, Baltimore, Philadelphia and New York Harbor, and $1.55 at Albany, New York.

Issuance of the schedule followed an investigation by OPA in which, it was said, consideration was given to all pertinent factors, including current charter rates, actual costs of operating company-owned tankers, the fuel-oil-supply position, defense operations in which fuel oil is required, and the general economic position of refiners and marketers on the Gulf and East Coasts.

Tanker Shortage

Disclosing that tankers have been diverted from their normal runs to go into military service on supply lines "that now reach into every ocean," and that tanker sinkings and the hazards of war have

interrupted normal shipments, OPC on January 20 asked companies operating on the East Coast and in the Pacific Northwest to make greater use of railroad tank cars to supply those areas.

It was pointed out that during recent weeks, the trend of petroleum stocks on the Atlantic Seaboard has been downward and a similar development has occurred in the Pacific Northwest, which is almost completely dependent for its petroleum supplies upon movement by tanker from Southern California.

In announcing the appeal to the companies, OPC took occasion to point out that Coordinator Ickes, last summer, proposed the construction of a pipe line from Texas to the New York-Philadelphia area, but met with sharp opposition and final rejection of the plan.

Confronted with a recurrence and intensification of the tanker shortage which last summer caused a furore throughout the East, Ickes conferred with John J. Pelley, president of the Association of American Railroads, who reported that enough cars were available to move large quantities of oil.

In asking the eastern companies to resort to the use of tank cars, the coordinator's office admitted that rail transportation would add to costs and promised to bring the matter again before the Office of Price Administration.

Up Eastern Prices

First results of OPC's promise to seek relief from Henderson for companies bearing increased costs by reason of the use of tank cars came January 22 in an order from OPA permitting an increase of three-tenths cent per gallon in prices in 15 Eastern and Southern states.

Henderson's announcement of his action pointed out that it was in fullfilment of assurance given last fall to the oil companies that they would be reimbursed for additional transportation expenses. The permitted increase is designed to cover additional costs incurred since September 4.

"Permission to increase these prices is given with the definite understanding that the oil companies affected will resume a plan to share equitably the increased costs of transportation of petroleum and petroleum products by tank car over transportation by tanker under the Maritime Commission charter rate ceilings," Henderson said.

"The Office of Price Administration reserves the right to adjust the motor-gasoline price when the additional revenue accruing to the oil companies pursuant to the plan above mentioned shall equal those additional expenses incurred by tank car or other alternative means of transportation, any combination thereof."

While the situation in the East parallels that which prevailed last summer, as a result of the diversion of tankers from the Gulf-Atlantic run to British service, conditions now are somewhat better as a result of the construction of three pipe lines. While by no means capable of offsetting diversions and sinkings, these lines will help to fill the gap until new vessels now being constructed can be brought into service.

New tankers are scheduled to come off the ways this year at the rate of three to five ships a month under the Maritime Commission's program to add more than 200 vessels to the United States oil fleet this year and next — a program which probably will be enlarged to make up for the ships which will be lost by war action.

Reports to OPC disclosed that the use of tank cars had begun to increase even before the situation was called to the companies' attention.

A total of 2,410 cars were shipped into the Atlantic seaboard territory during the week ended January 17, it was announced by the oil agency on January 22.

This represented an average daily movement of 344 cars, or 77,400 barrels compared with 261 cars or 58,725 barrels in the preceding week.

Transportation

Possibilities of converting ordinary railroad tank cars for the transportation of liquefied gases under pressure, such as iso-butane, which is essential to the production of aviation gasoline, are being explored by OPC, the Interstate Commerce Commission, the Association of American Railroads and car-building companies and tank-car owners, it was disclosed January 21 by Coordinator Ickes.

Result of the inquiry, Ickes said, may be a reshuffling of present car assignments to save both the time that would be required to build new cars and the steel which would have to be expended for the construction of such equipment, but no mention was made as to what effect this might have on the plan to have the companies on the East Coast make up for lack of tankers by greater use of rail facilities.

Ickes explained that the demand for cars for the movement of liquefied gas has mounted steadily since the entry of this country into the war. The cars are needed to haul increasing amounts of iso-butane to the 100-octane plants and, in addition, some of the large military camps require great quantities of normal butane for heating purposes and many defense plants are using the gas for heat treatment of steel and other metals.

The tests will be made by three companies and the selected cars will be equipped with the fittings and safety devices needed to make them suitable for handling butane, and trial service certificates will be sought from the Interstate Commerce Commission and test runs made.

Transportation of liquefied gases is a highly specialized service, requiring cars capable of standing up under high-pressure loads. About 1200 cars are in this service, with a few additional building. There are some 1800 others which meet the rigid requirements, but these are already operating in other essential services and are not available.

Aviation Fuel

Picking up contracts for 100-octane-aviation gasoline as rapidly as possible, Defense Supplies Corporation on January 19 announced that it had reached an agreement to take all such gasoline produced by The Texas Company at its Port Arthur, Los Angeles and Lockport (Illinois) refineries.

The company is to increase its production from the current 4050 barrels per day to 9510 barrels per day, to do which it will be necessary to construct additional facilities at a cost of $11,500,000, of which DSC will advance $8,500,000, to be repaid in gasoline. The contracts will run for three years after the new facilities are completed, with an option to DSC to extend

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THE WEEK'S NEWS

Allowables

February Allocation Down; Some States Slightly Up

A daily average production of 4,101,800 barrels of crude oil was set by Coordinator Harold L. Ickes January 21 as the required output for February, a reduction of 36,600 barrels from his January allocation but 502,100 barrels above the actual February, 1941, production.

In accordance with the announcement regarding initiation of the certification procedure, beginning with January, the recommended production rates for next month reflect minor adjustments as between states to effect a better balanced participation by each in producing the quantity of crude necessary to meet national requirements.

The feature of the February allocations was the granting of a 23,500 barrel a day increase to Texas. This increase is designed to permit the state to step up the production of aviation-grade crudes, for which the demand is increasing steadily as the aviation-gasoline program gets under way. The only other states to be given increases were Louisiana, 5700 barrels; Arkansas, 800 barrels; Pennsylvania, 600 barrels; Kentucky, 100 barrels, and Colorado, 600 barrels.

Specific allocations to the several states, as announced in telegrams to state and conservation officials, were as follows:

RECOMMENDED PRODUCTION RATES

State	February 1942 Barrels Per Day	January 1942 Barrels Per Day
Texas	1,596,000	1,573,500
California	632,300	646,200
Oklahoma	395,300	415,700
Illinois	371,800	386,400
Louisiana	335,000	329,300
Kansas	251,700	259,900
New Mexico	119,300	121,200
Wyoming	78,000	78,600
Arkansas	74,500	73,700
Mississippi	57,400	60,400
Pennsylvania	48,000	47,400
Michigan	47,000	47,400
Montana	20,400	21,500
Indiana	17,200	17,300
New York	14,700	15,000
Kentucky	12,500	12,400
West Virginia	10,000	12,000
Ohio	9,000	9,000
Colorado	6,500	5,900
Nebraska	5,200	5,600
Total	4,101,800	4,138,400

Texas to Have Larger Allowable in February

The Texas Railroad Commission has been advised that the consumer demand for Texas oil during February will be 1,596,000 barrels. This information was received last week from the Office of the Petroleum Coordinator. The new figure is an increase of 22,000 barrels over the January recommendation, and 96,400 barrels higher than the estimate for December, 1941.

Commission Chairman E. O. Thompson thought the effect of this increase would be to encourage extension of Texas fields and new discoveries.

The other members of the commission, together with the Director of Production, Dr. F. V. L. Patten, were in Washington when the information arrived. The purpose of their mission was not disclosed, but most observers were of the opinion that it involved closer cooperation between the Texas commission and officials in Washington.

Pending before the commission are 900 applications for permits to drill wells. Each case has been disposed of by the commission but no action has been taken by OPM. Some solution to this problem may be worked out in Washington during the week.

Bureau Reports November Refinery Runs Decline

A decline of 38,000 barrels in daily average crude runs to stills in November as compared with the preceding month was reported by the Bureau of Mines January 13, but the November average of 4,051,000 barrels still was 539,000 barrels above the November, 1940, level.

The bureau's monthly refinery report showed no data for receipts of foreign crude, in line with the recent decision of the government to suppress all export and import statistics which might be of value to the enemy.

Total receipts at refineries, however, were 117,474,000 barrels, while runs to stills at 121,539,000 barrels and fuel and losses at 128,000 barrels left a surplus which brought about an increase in stocks from 51,091,000 to 51,631,000 barrels, it was stated.

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OIL IS AMMUNITION ★ KEEP 'EM PRODUCING

Control

Federal Rules Considered In Texas Spacing Orders

The effect of federal control was apparent in several field hearings held by the Texas Railroad Commission last week. The Texas Company asked for 40-acre proration units for each separate producing zone in the new Fargo field, Wilbarger County. There are now three zones producing and two more are prospectively productive.

The company also asked that the commission abandon its bottom-hole-pressure factor in the proration formula, because the average pressure is difficult to determine unless each sand is handled separately.

Pan American Production Company, however, in requesting rules for the Cockfield production in the Goodrich field, Polk County, asked for 20-acre spacing despite the federal recommendation.

E. V. Hewitt expressed the opinion that one well might not drain 20 acres effectively in this area because of the low porosity and permeability. In addition to that, the sands are lenticular and shale out between 20-acre locations in some cases. The company asked for standard 20-acre spacing and straight acreage proration.

For the Janola field in Eastland County, 40-acre units were requested by Minerals and Metals, Incorporated.

The attitude of one commissioner relating to these proposed changes was contained in a dissenting opinion relating to the La Ward field in Jackson County. The commission has issued an order increasing the size of the unit from 20 to 40 acres, but Commissioner Olin Culberson dissented because the field had been developed on a different plan. In his dissent, Culberson said:

"I cannot agree with the majority of the comimssion in changing the spacing rule in this field, because of the property interests that are already involved in the 20-acre spacing that has been authorized in this field. Under facts heretofore presented to the commission, we fixed a 20-acre spacing rule and now in order to accommodate the convenience of one operator, namely Moore & Ahern, I do not think it fair nor equitable to the already developed acreage in this field, and particularly to the rights of the royalty owner, that there should be a change made that will discriminate against the tracts that have already been drilled on a 20-acre pattern."

Buttram Says Materials Industry's Prime Need

The oil industry's primary needs in the all-out war are materials to work with, a crude price that will meet costs, and the right to work together for the national good, Frank Buttram, president of the Independent Petroleum Association of America, told a district meeting at Houston January 20.

First need is material for operating, and especially for drilling, Buttram said.

"We are called upon to discover and

make available immense new reserves of petroleum. We will try to do that but we should have the tools and materials. There should be fuller recognition of the importance of supplying the industry with its steel and other requirements. We might make bricks without straw but we cannot drill wells without steel. This is not the time when weeks can be spent in debating whether a priority order for a necessary well may be granted.

"Second requirement," he said, "is the readjustment of the crude price. We urge it because the industry can not engage in exploratory or development work, which is a definite national necessity, unless it can pay the cost of that work as it goes along. I believe a correction of the present low price of crude is inevitable."

Buttram warned of another problem, that of increased abandonment of small wells. Raids being made on these wells for casing to be used in developing wells of larger expected production is dangerous, he said.

"A precedent is being established, which if long followed, will create a staggering waste of reserves which should serve the nation for many years to come. The blame for the premature abandonment may be divided, but a great part of that blame rests upon the shoulders of those who have made it more profitable to abandon these producing wells for the sake of the casing than to produce them for the sake of their oil."

There is a third requirement, he stated, if the industry is to do its wartime job.

"We should have legal recognition of the importance and propriety of cooperative effort within the industry. We should be able to face the present situation in a united effort. We need the strength that comes from union. If the small units in the industry are to survive and give the desired service to the nation, they should be permitted to work together."

Charles I. Francis, Houston attorney, was chairman of the meeting. Winston P. Henry, Houston oil man, reported on resolutions promulgated at the last convention.

District Committee Makes M-68 and P-98 Suggestions

The production committee of District 2, meeting at Tulsa, analyzed orders M-68 and P-98 and made specific suggestions as to clarification of these orders. Recommendations, expressed in resolutions, were formulated by the committee, these being designed to speed action, to assist the operators and toward a more exact interpretation of the 1-to-40 ruling.

The committee asked that some method be provided for "fixing the well spacing pattern to be observed in drilling and completing wells to comply with the restrictions and limitations" of the order. It further recommended that state regulatory bodies of District 2 be authorized to designate by order the spacing patterns to be followed in the fields. Specifically it named the following as appropriate agencies to make such spacing designations: Corporation Commission of Oklahoma, Corporation Commission of Kansas, Department of Mines and Minerals of Illinois, Department of Conservation of Michigan, Department of Mines and Minerals of Kentucky, Division of Mines of Ohio, State Geologist of Nebraska, and such person or persons as the governor of Indiana might designate. The foregoing states are those which produce petroleum in District 2.

Another source of great delay in conducting oil field operations pointed out by the committee was the provision in Order P-98 that the director in charge of the nearest district office of the Office of Petroleum Coordinator must countersign certain purchase orders on materials covered by preference ratings. This provision, said the committee, would force the shutting down of many drilling and producing wells for indefinite periods while the operator was awaiting the signature of the district director, located, in many instances, hundreds of miles from the operator's home. Tulsa operators, for example, would have to send or take their purchase orders to Chicago.

The committee pointed out that another effect of the provision for counter-signature of the director would be to cause accumulation of stocks of materials and equipment because of delay in putting them to use, thereby preventing conservation of materials and supplies. The committee recommended that this provision for endorsement of purchase orders by the district director be stricken from Order P-98.

A third resolution dealt with pumping wells. Order M-68 said in one section that materials for maintenance and repair were expected but in another section it seemed to limit the acquiring or use of material to one pumping well to each 10 acres. The committee saw a possible conflict in the two sections, further declared that there are thousands of producing wells in District 2 that average more than one well to 10 acres and that if the second section named applied, thousands of wells would have to be shut down because of inability to obtain material and equipment for maintenance and repair of equipment now installed.

The committee's recommendation was that Order M-68 be amended to provide that no restrictions be placed on acquiring material for maintenance and repair of pumping or other artificial lifting equipment on wells that were being operated by such equipment on or before December 23, date of original issuance of Order M-68.

The Production Committee of District 2 consists of 12 members. Eleven were present at the Tulsa meeting. Those attending were: O. D. Donnell, Ohio Oil Company, Findlay, Ohio, chairman; H. B. Fell, Simpson-Fell Oil Company, Ardmore, Oklahoma, vice chairman; Howard Keck, Superior Oil Corporation, Evansville, Indiana; A. U. McCandless, Mahutska Oil Company, Robinson, Illinois; L. F. McCollum, Carter Oil Company, Tulsa; H. M. McClure, Alma, Michigan; H. N. Pardee, The Texas Company, Tulsa; Ralph Pryor, Wichita; Clarence T. Smith, Flora, Illinois; Earl D. Wallace, Petroleum Exploration Company, Lexington, Kentucky, and A. S. Ritchie, McPherson Drilling Company, Wichita, Kansas. K. S. Adams, Phillips Petroleum Company, Bartlesville, was absent. The meeting was also attended by Wirt Franklin, director of production, District 2. His offices are in Chicago.

Gas Well in Oil Field Presents Some Complications

A new problem for Texas oil operators was presented last week at a hearing before the Texas Railroad Commission on the application of the Salt Dome Oil Corporation to complete a well in the North La Ward field, Jackson County, as a gas well.

The well was drilled for oil, but that sand failed to produce. Salt Dome asked permission to go back up the hole and produce gas from another zone which was separated from the oil sand by 25 feet of shale. While other operators in the field had no objection to this plan, Phillips Petroleum Company was concerned about one feature. The well is drilled a short distance from the Phillips lease, the latter containing only 313 acres. Since federal authorities have required assignment of 640 acres to a gas well, the Salt Dome well might be allowed to produce, but Phillips could not drill because its lease is too small. This question was developed at some length in the course of the hearing, and it was believed that Phillips engineers might present the case to Washington in the event the commission grants Salt Dome permission to complete the well as a gas producer.

Want Flush Water Wells in East Texas Shut in

Revision of the Texas Railroad Commission's order governing salt-water disposal in the East Texas oil field was requested at a hearing held in Austin last week. There were two primary changes requested. The first would allow the transfer of allowables from salt-water leases to other properties better situated. The second would allow closing in of a well producing more than 100 barrels of salt water daily, and the production of the allowable from this well from other wells on the same lease.

The transfer clause, as it has been termed, has been urged by operators since the beginning. They point out that by this method leases which produce large volumes of water could be shut down, the water left in the reservoir, and the oil produced elsewhere. While the proposal would involve a great deal of bookkeeping and numerous tests of salt-water wells, engineers are of the opinion that it would do much to maintain pressures and eliminate the necessity for the injection of large volumes of salt water.

Evidence was presented to show that as of December 15, 1941, there were 5368 wells producing more than 2 percent water daily. These wells produced a total volume of 438,773 barrels of salt water each day. However, of the salt water wells, 1292 produce 100 barrels of salt water or more every day. Among them they produce a total of 358,056 barrels of salt water, or 82 percent of the total salt water produced in the field daily. Obviously, if these wells could be closed in, the volume of salt water would be reduced and the problems simplified to a large extent.

Developments of the Salt Water Committee were outlined to the commission, and the charter for the Salt Water Disposal Company formed recently was included in the record.

By adoption of the proposal offered,

operators thought that the need for much equipment could be eliminated and the injection wells now operating could be used more efficiently. There were 47 of these injection wells operating during December, and they returned an average of 79,000 barrels of water daily which was obtained from 1353 wells. It was estimated that the salt-water-disposal system proposed by the operators would cost $4,000 daily.

The proposed order said in part that operators should be given the right to "assign all or any part of the right to produce the additional allowable oil to any other operator or operators in the field, or to a salt-water-disposal company as all or part of the compensation for returning the salt water to the Woodbine reservoir as its rates or rules of compensation may authorize..."

"Each operator of a well producing more than 100 barrels of salt water per day as shown by the current well-status report shall have the option of shutting in such well and producing the allowable of the well from other well or wells on the same lease designated by the operator and approved by the railroad commission for a period not to exceed six months, and for additional six-months periods as herein provided. At the end of each six-months period a test of at least 72 hours duration shall be made to determine the capacity of the well to produce oil, its proper oil allowable, and its water production..."

Shell Erecting Terminals Along Plantation Line

Shell Oil Company, paralleling the construction of the new Plantation Pipe Line which will run from Baton Rouge, Louisiana, to Greensboro, North Carolina, is erecting buildings and installing pumping equipment and tanks, with contracts amounting to more than $1,000,000 at the company's eight pipe line terminals on the line. These new terminals are being located at Meridian, Mississippi, Birmingham, Alabama, Atlanta, Georgia, Spartanburg, South Carolina, Charlotte, North Carolina, Greensboro, North Carolina, Chattanooga, Tennessee, and Knoxville, Tennessee, and are expected to be completed about the middle of 1942.

Storage facilities at these new terminals will consist of several 3,360,000-gallon tanks for gasoline, several 630,000-gallon tanks and also several 1,050,000-gallon tanks, for kerosene and fuel oil. The gasoline storage tanks will be the non-hazardous, floating roof type, while the fuel oil and kerosene tanks will be of the cone roof variety.

In addition, warehouses, offices and garages are being built at all terminals, along with loading racks to accommodate tank trucks and tank cars. The main territory to be supplied by tank car and trucks from the terminals, all of which are connected by railroads, will comprise roughly the area within a 75- to 100-mile radius of the terminals.

The Plantation Pipe Line is a 1261-mile artery of 12-, 10- and 8-inch pipe. Original plans called for the delivery of 1,260,000 gallons daily. However, in the interest of the present emergency, this has been increased to 2,520,000 gallons, and officials claim that by adding pump stations, this capacity can be increased to 3,780,000 gallons daily if necessary.

Washington Roundup

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them for an additional two years. The average price to be paid for the gasoline is slightly in excess of 13.5 cents per gallon, it was disclosed.

On January 20, Coordinator Ickes announced that he had sent a recommendation to the Defense Plant Corporation for construction of two government-owned plants for the manufacture of 100-octane gasoline, to be operated for the government, respectively, by The Pure Oil Company, Chicago, and the Southport Petroleum Company, Kilgore, Texas.

Location of the plants and their estimated cost was withheld by OPC, although DSC, in announcing its purchase contracts, had indicated both.

It was explained by Deputy Coordinator Davies that the construction of plants by the government was proposed as a means of furthering the expansion of production to not less than 150,000 barrels a day. More than half that amount has been provided for by contracts arranged by DSC in the past few weeks.

"Wherever possible, private capital should do the job," Davies said. "But time is so precious, and the need for 100-octane-aviation gasoline is so great that some government construction is imperative."

Davies disclosed that the purchase contracts of DSC will enable the government to acquire 100-octane gasoline at a price more than 11 percent lower than the average price paid for the product during the last six months of 1941.

The total saving to the government on the contracts so far signed, alone, he said, will amount to several million dollars during the emergency.

The Southport company plant will be located at Texas City where it already has a refinery but no aviation-gasoline production facilities and will cost in the neighborhood of $4,000,000 to get an output of 3000 barrels a day. The Pure Oil Company plant is expected to be located at Nederland (Beaumont).

Texas Railroad Commissioners Sadler and Culberson were in Washington when the proposal for government construction was announced, discussing with OPC officials their plan to reconstitute Texas production so as to bear down heavily on aviation-grade crudes from the coastal area.

The commissioners were reported to have told the coordinator's office that they would be willing to take a cut on Texas' over-all production if permitted to increase the output of the higher value aviation crudes, which will be in steadily intensifying demand as production of 100-octane gasoline and synthetic rubber gets into full swing.

Butadiene Plant

A well-known oil man, who refused to let his name be used, disclosed this week that representatives of a group of refiners operating in Texas have agreed to undertake the production of 50,000 tons of butadiene annually.

According to this source, five companies will take part in the project, and will ask the government, through the Federal Loan Agency, to build the plant, to which they will supply the raw materials. They plan tentatively to organize an operating company to run the butadiene plant for the government, producing at cost.

The preliminary arrangements for the project were made last week at a meeting in New York, at which a representative of OPC was present at the request of the interested companies. The OPC official, it was said, gave the meeting the benefit of the comprehensive study of synthetic rubber which has been under way in the OPC for some time, and was asked to get the approval of the Department of Justice for the concerted action which would be necessary, which he agreed to do.

The first step of the group will be to visit the oil, research and chemical companies which are familiar with butadiene production, to get a complete body of information on which they will base their plans for a plant. These visits are said already to have been initiated, and it is hoped that an estimate of the cost of the plant and a rough plan will be ready within a month.

Production and Still Runs Off; Fuel Oil Stocks Decline

Latest statistics of the industry, covering the week ended January 17, reflected some further curtailment of both production and processing of crude oil, although operations remained well above the corresponding levels of a year ago.

The curtailment of refinery runs did not interfere with normal seasonal additions of gasoline to storage, but stocks of heating oil were sharply reduced, while those of heavy fuel oils also were drawn upon in an exceptionally large amount.

Entering into the large drop of stocks of light fuel oil was continued cold weather, although the decline was abnormally large, and must have reflected a lagging of current production behind current consumption. The American Petroleum Institute reported that stocks of gas oil and distillate fuel totaled only 43,984,000 barrels as of January 17, 1942, which was over 3,000,000 barrels less than the total reported a week earlier. In the corresponding week of last year the stocks of these oils were reduced only about 1,200,000 barrels. The total now on hand is, however, 3,606,000 barrels (9 percent) above that of 40,378,000 on hand a year ago. This relatively favorable situation, as compared with a year ago, reflects earlier special efforts of the industry, last summer and last fall, to avert any scarcity of heating oil this winter; and the recent heavy withdrawals possibly may have been brought about in part by decision of refiners to cut down the plant yields of this product, in view of the fact that the season of heavy consumption now is well advanced.

The large reduction in stocks of heavy fuel oil, however, did not have any favorable aspects, for the inventories of heavy fuel oils are smaller than desirable, and any reduction is an adverse development.

The stocks of residual fuel oil were reduced during the week of January 17 from 94,885,000 to 92,703,000 barrels, a decline of over 2,000,000 barrels, which compared with a decrease of only somewhat over one million barrels in the corresponding week last year. The present stocks are 6,589,000 barrels (6.6 percent) smaller than those held a year ago. Residual fuel oil currently is a highly important petroleum product, despite the fact that it is a residue left after taking out more valuable products from a barrel of crude, for it has a vital role in the prosecution of the war, being used in great quantities by the Navy and Army, as well as in the industries which are producing war materials.

Stocks of gasoline were increased about 1,500,000 barrels during the week ended January 17, which was about a normal gain for this time of the year. In the week ended January 17 last year there was an increment of about 1,000,000 barrels. The gasoline stock situation currently offers no reason for anxiety. Present stocks of 95,617,000 barrels are 8,688,000 (10 percent) in excess of the 86,929,000 barrels held at this time last year. The current storage appears adequate, in view of the prospects of some curtailment this year in

United States Crude Oil Production Close to Peak

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Recommendation of Petroleum Coordinator for January	State Allowable (Barrels Daily in January)	BARRELS DAILY FOR WEEK ENDED Jan. 17	Jan. 24
TEXAS:				
Texas Gulf Coast	.....	.....	297,800	345,900
East Texas	.....	.....	369,200	440,100
East Central Texas	.....	.....	87,700	93,600
South Texas	.....	.....	220,200	260,400
West Texas	.....	.....	295,300	349,300
North Texas	.....	.....	145,500	147,200
Panhandle	.....	.....	88,400	91,600
Total Texas	1,573,500	[1]1,551,457	1,504,100	1,728,100
CALIFORNIA:				
Long Beach	.....	.....	38,600	37,400
Midway-Sunset	.....	.....	57,000	47,800
Kettleman Hills	.....	.....	31,900	34,700
Wilmington	.....	.....	87,100	85,700
Others	.....	.....	418,000	424,600
Total California	646,200	[2]646,200	632,600	630,200
OKLAHOMA:				
Oklahoma City	.....	.....	78,650	81,050
Seminole Area	.....	.....	110,350	110,250
Others	.....	.....	227,950	225,850
Total Oklahoma	415,700	425,000	415,950	417,150
ILLINOIS:				
Salem	.....	.....	64,850	67,150
Louden	.....	.....	57,650	56,500
Centralia	.....	.....	6,800	7,100
Other New Pools	.....	.....	196,950	224,950
Old Pools	.....	.....	11,600	11,800
Total Illinois	386,400	.....	337,850	367,500

DISTRICT OR STATE	Recommendation of Petroleum Coordinator for January	State Allowable (Barrels Daily in January)	BARRELS DAILY FOR WEEK ENDED Jan. 17	Jan. 24
LOUISIANA:				
North Louisiana	.....	.....	82,200	81,950
South Louisiana	.....	.....	279,700	284,100
Total Louisiana	329,300	[3]361,111	361,900	366,050
KANSAS	259,000	[4]256,900	254,850	254,200
NEW MEXICO	121,200	121,200	118,300	118,500
EASTERN STATES:				
Pennsylvania Grade	74,400	.....	70,500	73,000
Others, Eastern	21,400	.....	18,500	18,500
Total Eastern States	95,800	.....	89,000	91,500
MOUNTAIN STATES:				
Wyoming	78,600	.....	82,000	84,450
Montana	21,500	.....	20,750	20,800
Colorado	5,900	.....	5,250	5,350
Total Mountain States	106,000	.....	108,000	110,600
MICHIGAN	47,400	[5]54,850	49,500	51,150
INDIANA	17,300	.....	21,700	21,100
ARKANSAS	73,700	[6]75,689	73,050	73,400
MISSISSIPPI	60,400	.....	73,350	75,500
NEBRASKA	5,600	.....	5,300	5,850
[7]Total 8 Prorated States	3,466,900	3,492,407	3,410,250	3,638,750
Total United States	4,138,400	.....	4,045,450	4,310,800

[1] Calculated daily average of actual production at beginning of month, allowing for underproduction of 3½ percent below net allowable, which was figured at 1,620,659 barrels daily as of January 1. However, allowable normally increases as new wells are completed, and consequently, actual daily average production for month may be expected to be slightly greater than average as calculated for January 1. Under January order, most Texas fields were ordered shut down January 4, 11, 15, 18, 25, 30 and 31.

[2] The District 5 Production Committee has named a Conservation Committee to distribute the California January quota of 646,200 barrels, as assigned by Petroleum Coordinator Ickes.

[3] Set before OPC recommendation made; this explains 31,811 barrel excess. Louisiana Conservation Committee will comply with OPC recommendation beginning February 1 (or on January 15 if OPC wishes.)

[4] Order also will permit 3,000 barrels for new wells; total same as OPC estimate of demand.

[5] No definite state allowable fixed under prescribed regulations; figures shown here represent daily average production in four weeks ended December 27.

[6] Allowable for first quarter of year; actual production in January not expected to exceed Office of Petroleum Coordinator's figure of 73,700 barrels.

[7] Texas, California, Oklahoma, Louisiana, Kansas, New Mexico, Arkansas, Michigan.

consumption of this product, due to the shortage of tires and other factors.

Still Runs Down

Crude runs to stills averaged 3,723,000 barrels daily in the week ended January 17, the American Petroleum Institute reported. That represented a sharp curtailment from the 3,891,000 barrels processed daily during the previous week. Of the decrease of 168,000 barrels in the daily average runs, 62,000 barrels was accounted for by plants on the East Coast, which averaged only 565,000 barrels daily (79.1 percent of capacity), compared with 603,000 daily (85.7 percent) the previous week. Although no official explanation is available, this cutting down of plant activity in the East possibly reflects recurrence of last year's difficulties in maintaining adequate tanker transportation facilities from the Gulf Coast to the Atlantic seaboard. Sinkings of tankers along the American East Coast by submarines lately doubtless have slowed down movement of boats, and it has been indicated that some tankers normally used on the Gulf-Atlantic Coast run have been transferred into the Pacific for service there.

Refinery runs on the Texas Gulf Coast were down 71,000 barrels (from 92.8 percent of capacity to 85.5 percent), a decrease which tended to confirm the above statements regarding transportation difficulties. The only other important reduction in refinery runs was that of 35,000 barrels in the Indiana - Illinois - Kentucky area, from 90.2 percent to 85.8 percent of capacity.

Despite the cutting down of plant runs, the operations were 7 percent above those in the corresponding week of last year. The runs of 3,723,000 barrels daily were 252,000 barrels above those in the week ended January 17, 1941.

Crude production of 4,045,600 barrels daily in the January 17 week was down abruptly from that in the preceding week, in reflection of the Texas shutdown system of proration. For each month as a whole, heretofore, production of crude has kept well in line with refinery demand for it. Despite the decrease just mentioned, crude output was 433,700 barrels (12 percent) greater than in the like week last year.

Crude oil stocks now are being held about stationary, in reflection of strict balancing of production with refinery demand. These stocks totaled 244,364,000 barrels on January 10, 1942, the Bureau of Mines reported. That was practically the same amount as at the beginning of the week. However, the present stocks are 15,000,000 barrels (6 percent) under those held at this time last year.

Crude Oil Production Again Near Peak

United States crude oil production showed a sharp increase in the week ended January 24, having averaged 4,310,800 barrels daily, compared with 4,045,450 the week before, and having approached the peak of 4,336,850 barrels daily that was reached at the middle of last November. The new production rate was about 150,000 barrels over daily average market demand for domestic crude as forecast for January by the Bureau of Mines.

Texas increased to an average of 1,728,100 barrels daily, compared with 1,504,100 the week before.

Another important change in production was the increase of almost 30,000 barrels in Illinois, which averaged 367,500 barrels daily against 337,850 the week before.

California was down slightly, from 632,600 barrels to 630,200 barrels, in the week of January 24, which is still under demand of 646,200 barrels.

Louisiana was up 4150 barrels to 366,050 daily, and was 4939 barrels above the state's quota. Kansas dropped slightly, from 254,850 barrels to 254,200 barrels daily. Wyoming production was up 2450 barrels daily, to 84,450 barrels. Michigan production increased from 49,500 to 51,150 barrels.

Southwestern Measurement Short Course Dates Set

The General Committee of Southwestern Gas Measurement Short Course, held annually at University of Oklahoma, Norman, and sponsored by the College of Engineering, has announced 1942 dates as April 21-22-23.

Mexican Report Shows Production Down in 1941

Published figures of Petroleos Mexicanos show that the Mexican government oil agency produced in 1941 about 41,200,000 barrels of oil. This was only 93 percent of production the previous year, and shows the effect of Mexico's loss of foreign outlets. The 1941 output was only 88 percent of the 46,690,000 barrels produced in 1937, the last full year of operation by private oil companies in Mexico.

Other figures of Petroleos Mexicanos showed the value of exported oil last year was $14,540,000 as compared to $17,290,000 in 1940. Facts on destinations of oil exported last year are not available, although Mexico is understood to have abandoned its former profitable trade with Japan, Germany and Italy. Informed private sources in Mexico report that in 1940 the country exported 120,870 cubic meters to Japan, 553 cubic meters to Germany and 470,847 to Italy. The same sources declare that in 1939 Mexico exported

Trends of Operations and Changes in Stocks

Figures are from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines' basis, except those on crude stocks, which are from Bureau of Mines weekly reports.

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1939:						
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,085,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
August 5	[2]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[1]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
October 7	3,435,850	3,505,000	231,564,000	[6]71,152,000	38,549,000	114,397,000
October 21	3,771,550	[2]3,650,000	[3]229,127,000	72,122,000	39,358,000	115,060,000
1940:						
January 27	3,611,600	3,470,000	237,339,000	87,914,000	27,407,000	103,015,000
February 24	3,732,100	3,490,000	240,836,000	96,719,000	25,390,000	103,419,000
March 30	3,841,250	3,585,000	250,561,000	101,370,000	23,778,000	105,081,000
April 20	3,858,550	3,535,000	254,881,000	[1]102,817,000	24,779,000	103,323,000
April 27	3,845,250	3,555,000	256,670,000	102,452,000	24,997,000	102,552,000
May 25	3,835,650	3,580,000	259,330,000	100,297,000	28,356,000	104,015,000
June 22	3,846,450	[2]3,690,000	260,891,000	97,276,000	32,751,000	104,683,000
June 29	3,639,550	3,625,000	262,059,000	95,142,000	33,590,000	104,486,000
July 27	3,690,400	3,555,000	262,579,000	90,173,000	38,981,000	105,924,000
August 31	3,501,350	3,575,000	265,865,000	85,393,000	44,766,000	108,774,000
September 28	3,799,950	3,600,000	263,609,000	82,273,000	47,986,000	108,450,000
October 26	3,640,300	3,565,000	262,746,000	80,891,000	48,893,000	108,475,000
November 9	3,584,200	3,510,000	261,631,000	[6]79,847,000	48,408,000	107,687,000
November 30	3,335,050	3,510,000	262,679,000	80,284,000	46,212,000	106,618,000
December 28	3,385,500	3,585,000	261,552,000	83,274,000	42,266,000	102,620,000
1941:						
January 25	3,599,100	3,625,000	260,093,000	88,762,000	39,039,000	100,297,000
February 22	3,629,650	3,590,000	261,783,000	95,812,000	34,381,000	98,631,000
March 29	3,746,550	3,625,000	266,187,000	[2]99,727,000	29,949,000	96,152,000
April 26	3,726,850	3,675,000	266,149,000	96,647,000	29,543,000	94,732,000
May 31	3,786,100	3,699,000	262,356,000	93,845,000	33,524,000	92,757,000
June 28	3,847,250	3,930,000	259,399,000	91,461,000	35,732,000	92,896,000
July 26	3,869,950	3,920,000	252,728,000	86,945,000	40,197,000	93,855,000
August 30	4,004,700	4,070,000	249,413,000	81,672,000	45,351,000	95,052,000
September 27	4,060,000	3,980,000	246,649,000	81,003,000	49,950,000	95,251,000
October 4	3,860,750	4,015,000	246,144,000	[6]80,870,000	49,553,000	96,016,000
October 18	4,110,550	[4]4,120,000	243,605,000	82,584,000	52,403,000	95,800,000
October 25	4,098,800	4,060,000	242,261,000	83,343,000	53,183,000	95,295,000
November 15	4,086,850	4,010,000	240,399,000	83,412,000	[2]54,983,000	95,993,000
November 22	[4]4,336,850	3,995,000	241,956,000	84,579,000	54,396,000	95,982,000
November 29	4,086,000	4,115,000	242,884,000	85,525,000	54,141,000	95,971,000
December 27	4,080,850	4,096,000	243,990,000	91,133,000	50,177,000	95,819,000
1942:						
January 3	4,038,000	3,961,000	244,440,000	92,987,000	49,357,000	95,857,000
January 10	4,229,150	3,891,000	244,364,000	94,204,000	47,250,000	94,885,000
January 17, 1942	4,045,600	3,723,000	.....	95,617,000	43,984,000	92,703,000
January 17, 1941	3,611,900	3,471,000	[4]259,342,000	86,929,000	40,378,000	99,292,000
Amount of change in past year	+433,700	+252,000	−14,978,000	+8,688,000	+3,606,000	−6,589,000
Percent change in past year	+12.0	+7.3	−5.8	+10.0	+8.9	−6.6

[1] All time peak. [2] Peak for year. [3] Lowest since April, 1922. [4] Stocks, January 11, 1941.
[5] Lowest since October, 1922, due to shut down of six Mid-Continent states. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.

29,933 meters to Japan, 761,594 to Italy and 1,008,364 to Germany. The figure on exports to Germany that year is decidedly at variance with a previous report that Germany had received no oil from Mexico in 1939. Also, it had been previously reported that Mexico sent the United Kingdom 1,067,175 cubic meters of oils in 1939, whereas informed private sources declare the United Kingdom actually received only 22,601 cubic meters.

Refinery investments, reports Petroleos Mexicanos, totaled 40,000,000 pesos last year, 44,000,000 pesos in 1940 and 29,000,000 pesos in 1939.

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HOUSTON, TEXAS

Canadian Output Up 15 Percent Last Year

Production in Canada last year, 97 percent of it coming from Turner Valley, topped all previous figures. A close preliminary estimate places 1941 production of crude oil and natural gasoline at 9,980,000 barrels, a gain of about 15 percent over 1940 production. Turner Valley production totaled last year around 9,686,000 barrels, of which 285,000 barrels was natural gasoline.

Developments in Turner Valley last fall have made it apparent that the region is due for an expansion this year, following a 20-mile extension of the field last month. Flush production from 5 wells in the north end of the field in November was 139,265 barrels, an average of 928 barrels per well daily. Production from the field last November averaged 27,170 barrels per day. In view of the promising outlook for the territory following the northern extension there is possibility that increased production will be facilitated by construction of a new pipe line to refineries at Calgary.

At Borradaile, Alberta, Franco Oils, Ltd., has completed construction of a 2000-barrel conditioning plant near the Vermilion field to treat the heavy oil being produced there for use as fuel oil in locomotives of the Canadian National Railways.

Texas Company Embarks On Construction Program

Sixteen directors and operating executives of The Texas Company made an inspection of the company's plants and facilities in the South and Southwest last week. The trip began in New Orleans January 17, and ended January 23 at Lawrenceville, Illinois.

The Texas Company is embarking on a large program for the construction and manufacture of toluene and 100-octane aviation gasoline, and is planning plants for manufacture of butadiene, the raw material from which synthetic rubber is made.

Starting from New Orleans, the party visited producing properties in South Louisiana. The next stop was Beaumont, then Port Neches and Port Arthur, Texas. There was a visit to the company's can factory on Terminal Island, Port Arthur, then the party proceeded to Houston. Some of the directors inspected sulphur properties at Hoskins Mound. The party then traveled northward to Oklahoma, where a visit was made to the new Apache field. This was followed by a trip through the Illinois field, with stops at Salem and at Indian Refining Company's plant at Lawrenceville.

Members of the party included G. N. Aldredge of Dallas, J. H. Lapham of San Antonio, W. J. Cummings, C. A. McCulloch, and W. H. Mitchell, all of Chicago, R. C. Shields of Detroit, Lester J. Norris of St. Charles, Illinois, and W. G. Dunnington, Henry U. Harris, Harry T. Klein, C. E. Olmsted, R. Ogarrio, M. Halpern, R. L. Saunders, R. F. Baker and W. S. S Rodgers, all of New York.

Other officials met the party at key points along the route.

JOHN M. FRANKLIN, president of International Mercantile Marine Company and president of United States Lines Company, recently was elected to the board of directors of Worthington Pump and Machinery Corporation.

U. S. FIELD OPERATIONS

Illinois

New Operations Continue At Low Level

First reports during week ended Jan. 21 totaled 23, including one well to be drilled deeper and salt water disposal well, to mark third consecutive week in which new operations have been less than 25. Magnolia testing Devonian lime at Jefferson County wildcat; large well completed in Dale field, Hamilton County.

Jefferson County: Magnolia's Riddle 1, NE SE SW 7-3s-1e, 3½ miles southwest of Woodlawn field, bailing acid water, salt water and slight amount of oil following acid in Devonian, 3752-69 ft.

Hamilton County: Carter Oil Co.'s Johnson 3, NW SW SE 12-6s-6e, flowed 1160 barrels in 14 hours after shot in Aux Vases 3055-71, one of basin's largest completions in recent weeks. It is in the Dale field.

Clay County: J. W. Sanders' Thompson 1, C N½ NW SE 30-3n-6e, pool opener in Aux Vases, temporarily plugged back to Benoist sand at 2667-72 ft, shot with 15 quarts, testing. In 16 hours after shot 250 ft of oil and 500 ft of water rose in hole. The well showed for 35-barrel producer in Aux Vases before plug back.

COMPLETIONS

Bond County—Magnolia's Elam 5, se se sw 3-6n-2w, Bethel 1011-1033 ft, td 1033, 3 bbls.

Clay County—Pure's Dobbs 1, n½ nw sw 10-2n-7e, abnd 3102 ft; Consol 2, n½ sw nw 10-2n-7e, abnd 3218 ft; Hosselton A 1, n½ nw se 10-2n-7e, McCl. 3038-3050 ft, td 3057 ft, 405 bbls; Pearce A 2, n½ sw ne 10-2n-7e, McCl. 3047-3062 ft, td 3065 ft, 1087 bbls; Staley 1, s½ ne sw 10-2n-7e, McCl. 3067-3075 ft, td 3080 ft, 1383 bbls. J. V. Dunbar's Gill B 1, nw sw se 13-2n-7e, McCl. 3025-28 ft, 3030-36 ft, td 3040 ft, 49 bbls. A. L. Stewart et al's Walker Hrs. 1, w½ sw sw 27-3n-5e, abnd 3082 ft.

Clinton County—J. J. Broadus' Geary 1, sw ne sw 14-1n-1w, Bethel 1439-1443 ft, td 1445 ft, 100 bbls. Newton & Ward's Schaeffer 1, ne ne se 13-3n-3w, abnd 1143 ft.

Edwards County—Central Pipe et al's Kent Comm. 3, w½ ne se 31-2n-14w, McCl. 3122-3132 ft, td 3135 ft, 1285 bbls. A. F. Dye et al's Kent 2, ne nw sw 32-2n-14w, abnd 3135 ft.

Effingham County: Wildcat—Gulf's Eralman's 1, c sw nw sw 11-8n-6e, abnd 2880 ft.

Fayette County: Wildcat—Ryan Oil et al's Torbeck 1, nw sw se 20-5n-2e, abnd 2028 ft. Homer Luttrell et al's Aucamp B 1, sw sw se 30-5n-3e, Bethel 1898-1908½ ft, td 1908½ ft, 80 bbls. Carter's Doty 4, ne se se 1-8n-3e, Weiler 1508-1520 ft, td 1520 ft, 36 bbls.

Franklin County: Wildcat—H. H. Wegener's McKamie 1, nw ne sw 30-6s-3e, abnd 2916 ft.

Gallatin County—Buell & Herndon's Egyptian T&T's 6, se sw se 16-8s-10e, Weiler 2415-2430 ft, td 2430 ft, 40 bbls.

Hamilton County—Shell's Ventress 5, nw se sw 12-6s-5e, L. O'Hara 3206-18, 3248-56 ft and 3277-85 ft, McCl. 3377 ft, td, 149 bbls. Texas' Lockwood 8, se se sw 13-6s-5e, Aux V. 3138-55 ft, L. O'Hara 3193-3208 and McCl. 3283-88 ft, td 3375 ft, 1118 bbls; Lockwood 8, sw sw se 13-6s-5e, A. Vases 3104-3122 ft, td 3350 ft, 1300 bbls. Shell's Smith 2, sw ne ne 13-6s-5e, A.V. 3116-56 ft, O'H. 3198 ft, td 3356 ft, 900 bbls; Flannigan 2, sw sw ne 14-6s-5e, A.V. 3120-52 ft, L. O'H. 3195 ft, td 3320 ft, 189 bbls. Dave Ring's Craddock 1, ne se ne 22-6s-5e, 180 bbls oil, A.V. 3188-3225 ft, td 3225 ft, 180 bbls. M. E. Roberts' Lockwood 1, se ne nw 24-6s-5e, abnd 1840 ft. W. C. McBride's Mayberry 2, se se se 12-6s-6e, A.V. 3052-3094 ft, td 3094 ft, 303 bbls. Shell's Daily 8, sw se ne 12-6s-6e, Beth. 2902-2930 ft, td 3178 ft, 61 bbls. Texas Co.'s Shavitz 3, w½ se ne 27-6s-6e, A.V. 3068-3080 ft, td 3100 ft, 317 bbls.

Iroquois County: Wildcat — Robinson & Puckett's Behrens 1, sw nw ne 7-25n-13w, abnd 935 ft.

Jasper County—Lain Oil & Gas Co.'s Valbert 1, ne ne ne 6-5n-14w, abnd 2890 ft. Pure's Stanley 1, c e½ nw se 18-5n-10e, McCl. 2827-2831 ft, td 2863 ft, 188 bbls.

Jefferson County—Jackson's Myers 4, se se ne 34-2s-1e, abnd 1823 ft; Myers 2, ne se ne 34-2s-1e, Beth. 1932-1998 ft, td 1998 ft, 40 bbls oil. L. B. Martin's Rosenberg 1, sw ne nw 35-2s-1e, Beth. 1975-1983 ft, td 1983 ft, 20 bbls. Levy et al's Hall 1, sw nw se 36-2s-1e, abnd 2011 ft.

Lawrence County—Sinclair-Wyo. Oil's All States Life 4, sw sw ne 22-2n-11w, Beth. 1745-1772 ft, td 1772 ft, 67 bbls. First Nat'l Bank & Trs.' Lawless 3, sw nw sw 18-4n-10w, Bridgport, 792-94 ft, 798-806 ft, td 806 ft, 1,750 MG.

Richland County—Pure's Coen 21, 30 ft e c w½ nw 9-3n-9e, Weiler 2591-2594 ft, td 2594 ft, 117 bbls. Magnolia's Sterchi 1, s½ se ne 6-4n-11e, abnd 3062 ft.

St. Clair County—Lee & Loven's Metter 2, nwc se 28-1n-10w, Trenton 552-64 ft, td 564 ft, 50 bbls. Tarlton Oil Co.'s Tarlton 8, se sw se 28-1n-10w, Trenton 649-714 ft, td 714 ft, 60 bbls. B. J. Smith's Shoudy 3, n½ sw nw 34-1n-10w, Trenton 555-608 ft, td 608 ft, 10 bbls. Gus Kinze's Young 1, nw ne sw 29-3s-6w, abnd 630 ft.

Wabash County—R. Young et al's Schaffer 2, ne se se 28-1n-12w, Tar Spgs, 1661-1666 ft, td 1666 ft, 15 bbls. Petrie, S. W.'s Trimble Est. 1, sw se se 35-2n-12w, Bethel 1975-1989 ft, td 1989 ft, 65 bbls. Hayes Drlg.'s Cotner 4, se ne nw nw 21-1s-12w, Cypress sand 1985-2000 ft, td 2000 ft, 175 bbls. Dean & Morton's Hein 3, nw sw ne 21-1s-12w, Biehl 1459-1484 ft, td 1994 ft, 200 bbls. W. W. Gray's Fee A 20, se sw nw 14-3s-14w, Cypress 2530-2545 ft, td 2545 ft, 102 bbls.

Wayne County—Wiser Oil Co.'s Dickey B 7, e½ se sw 34-1n-6e, Aux Vases 3014-34 ft, td 3034 ft, 230 bbls; Dickey B 6, w½ se sw 34-1n-6e, Aux Vases 3007-3010 ft, td 3037 ft, 200 bbls. United Products Co.'s Watson 2, s½ sw ne 35-1n-6e, McCl. 3175-77, 3182-88 ft, td 3225 ft, 20 bbls. Pure's Beckel 1, c e½ sw ne 11-1n-7e, Aux V. 2940-80 ft, Rosi. 3012-30 ft, McCl. 3067-70 ft, td 3075 ft, 324 bbls. Texas Co.'s Haught 1, n½ nw ne 28-1n-6e, McCl. 3184-3188 ft, td 3220 ft, 125 bbls.

White County: Pure's Fox A 3, ne sw nw 19-3s-8e, Aux V. 3233-3254 ft, td 3254 ft, 62 bbls. H. C. Spiller et al's Gray 3, sw sw nw 19-3s-8e, abnd 3390 ft. Texas Co.'s Poorman A 17, nw se nw 30-3s-8e, Aux V. 3205-3228 ft, td 3228 ft, 16 bbls. Arrow Drlg. Co.'s McIntosh 1, ne nw sw 30-3s-8e, Aux V. 3205-3229 ft, td 3229 ft, 160 bbls; McIntosh 2, nw nw sw 30-3s-8e, abnd 3415 ft. Texas' Poorman 18, ne ne nw 30-3s-8e, Aux V. 3200-3235 ft, td 3235 ft, 30 bbls. Haynes & Schnacke's Hon 1-H, ne sw ne 9-4s-14w, abnd 2961 ft. Sun's Brown B 1, n½ se se 12-4s-9e, abnd 3260 ft; Greathouse 41, sw sw nw 4-5s-14w, Waltersburg, td 2206 ft, 25 bbls. Superior's Ford 35, se ne sw 4-5s-14w, Aux V. 2846-2872 ft, td 2878 ft, 40 bbls; Ford 33, nw se sw 4-5s-14w, Aux V. 2840-2866 ft, td 2874 ft, 200 bbls; Ford 23, se nw sw 4-5s-14w, Aux Vases 2843-2871 ft, td 2881 ft, 200 bbls. Skelly's Karch A 6, nw ne nw 24-6s-10w, abnd 2888 ft. Magnolia's Sisson-Higgins 10, nw ne se 24-6s-10e, Pales. 2071-2087 ft, Tar Spgs 2251-2270 ft, td 2270 ft, 35 bbls. Sinclair's Reddy 3, sw se se 2-7s-8e, Walters 2234-2245 ft, td 2796 ft, 181 bbls oil. Cities Service's Mount 6, sw nw nw 12-7s-8e, Beth. 2734-2750 ft, td 2768 ft, 165 bbls.

WILDCAT STARTS

Gallatin County—Jarvis Bros.' Drone 1, n½ nw nw 8-9s-10e, dr.

Jackson County—G. D. Collins' Boyer 1, s½ sw nw 21-8s-3w, dr.

Jefferson County—Yingling & Mohawk Drlg. Co.'s Fouts 1, sw sw ne 20-1s-1e, dr.

Madison County—W. C. Cain's Tobias 1, sw sw nw 24-4n-7w, lcn. Downing & George's Sorento Bank 1, nw sw ne 31-7n-4w, lcn.

Perry County—J. Harsh et al's Newborn 1, se se nw 22-4s-1w, lcn.

Randolph County—C. N. Krysl's McCary 1, ne se se 2-4s-5w, lcn.

Wayne County—Bell Bess' Jones 1, w½ ne se 24-1n-5e, lcn.

White County—J. O. Delap et al's Biggerstaff 1, e½ se nw 33-5s-8e, dr.

Oklahoma

Discoveries Reported in Creek, Lincoln and Logan

Discoveries in Creek, Lincoln and Logan Counties; Arbuckle lime zone in Cumberland field barren; Apache producer extends field southeast.

Creek County: D. B. Malernee's Rowntree 1, SW NW SW 2-14n-7e, southeast of Stroud, officially opened first new oil pool of 1942, drilled plug to 3130 ft in Bartlesville sand topped at 3117 ft, flowed 154 bbls oil in 16 hrs, gas estimated 13,000,000 cu ft, no offsets.

Logan County: Cities Service Oil Co.'s Babcock 1, SW NE NE 10-15n-4w, opened new pool on Navina structure which has seen 11 failures in the same township, drilled to dry Wilcox sand, plugged back to Layton sand at 5010-5125 ft, blew in, cleaned itself, flowed 800 bbls oil in 24 hrs based on 10-hr test; gas estimated 2,500,000 cu ft.

Lincoln County: Haddock & Moore's Hert 1, SW NE SE 22-17n-3e, 1½ mi east of Sporn pool, opens new Wilcox

Summary of Drilling Operations in the United States, Week Ended January 24, 1942

	WELLS COMPLETED						
	Completions	Oil Wells	Gas Wells	Failures	†Miscellaneous	Total 1942	Total This Date 1941
Alabama	.....	.....	.....	.....	.....	1	.....
Arkansas	3	1	2	.....	.....	8	14
California	19	16	1	2	.....	86	88
Illinois	68	48	1	19	.....	267	239
Indiana	.....	.....	.....	.....	.....	19	35
Kansas	41	27	4	10	.....	175	139
Kentucky	.....	.....	.....	.....	.....	11	19
Louisiana	12	8	1	3	.....	93	99
Michigan	13	8	1	4	.....	64	54
Mississippi	2	1	.....	1	.....	20	11
Missouri	.....	.....	.....	.....	.....	.....	5
Montana	6	.....	6	.....	.....	17	8
Nebraska	4	2	.....	2	.....	7	12
New Mexico	14	10	.....	4	.....	33	21
New York	32	20	.....	.....	12	101	43
Ohio	29	4	12	13	.....	109	105
Oklahoma	62	31	3	24	4	177	163
Pennsylvania	15	.....	12	3	.....	30	245
Tennessee	.....	.....	.....	.....	.....	.....	1
Texas	179	133	9	36	1	705	593
West Virginia	8	5	2	1	.....	54	60
Wyoming	2	1	.....	1	.....	7	4
Total this week	509	315	54	123	17	1,984	1,958
Total last week	506	322	34	124	26	1,475	1,453
Total this year	1,984	1,236	174	469	105	.....	.....

† Includes old wells deepened, water-intake, gas input, and salt water disposal wells.

sand producing area, drilled to 4555 ft in sand topped at 4538 ft late in 1941 test blew in and was long delayed by bad fishing job, perforated up hole at 4530-40 ft, flowed 90 bbls 52.5 gr oil in 20½ hrs, 1,750,000 cu ft gas.

Caddo County: Texas Co.'s Mulkahay 4, NE SW SE 2-5n-12w, extended Apache field southeast; drilled to 3675 ft in Wilcox sand, washed in flowed 493 bbls oil in 1 hr test, shut in. .

Bryan County: Pure Oil Co.'s 2 Little-210, SW SE NW 34-5s-7e, first test to Arbuckle lime in huge two-county Cumberland pool, test drilled to 7500 ft in lime topped at 6814 ft, no oil shows, plugged back 5723 ft in McLish sand, flowed 106 bbls oil in 24 hrs., through 1-in choke.

COMPLETIONS

Caddo County—Texas Co.'s Z. N. Smith 7, sw sw nw 2-5n-12w, Bromide 3454 ft, pay 3475 ft, td 3605 ft, 3,000,000 gas, 7100 bbls oil.

Caddo County: Apache—Sinclair Prairie's Lewis 2, ne se sw 2-5n-12w, 1422 bbls oil, td 3795 ft.

Carter County: Tussy—Skelly's Tussy A-1, c se se nw 5-1s-3w, pump 125 bbls oil, td 3425 ft.

Creek County: Depew—Stanolind-Amerada's Starr 4, nw nw ne 18-15n-8e, Wilcox 3835 ft, td 4193 ft, shot 30 qts, flow 113 bbls oil.

Creek County: North Bristow—Zephyr Drlg. Co.'s Irelan A-1, ne se nw 3-16n-8e, redford 2825 ft, abnd 2827 ft.

Creek County: Glenn—Gulf's Vowell 21, 25 ft n c n½ sw 16-17n-12e, Glenn sand 1430-1588 ft, td 1593 ft, pb 1570 ft, shot 120 qts, pump 6 bbls oil. Sinclair Prairie's Berryhill 19, se sw sw nw 16-17n-12e, sand 1568 ft, td 1568 ft, pump 8 bbls; Kiefer 41, 110 ft w of c w½ se se 17-17n-12e, Glenn sand 1407 ft, td 1527 ft, shot 95 qts, pump 49 bbls.

Creek County: Nannford—Curtin Oil Co.'s Larremore 4, nw sw nw 10-19n-9e, Skinner 2088-20 ft, td 2106 ft, shot 40 qts, pump 31 bbls oil.

Grady County: Chickasha Gas—Mid-Continent's Nicks 1, c nw nw 27-5n-8w, sand 4900-50 ft, td 6500 ft, pb 5000 ft, abnd.

Jackson County: Altus—E. L. Geddes' Byrd 1, 10 ft n of se nw nw 14-1n-20w, pay 1381-91 ft, granite wash 1370-75 ft, td 1477 ft, pump 26 bbls oil.

Kay County: Ponca City—Continental's Cry 1, c nw se 7-25n-2e, Miss. 3810 ft, td 3857 ft, pb 3813 ft, shot 20 qts, abnd.

Kay County: Wildcat—Skelly's Hardisty 1, c e½ sw se 4-28n-4e, Miss. 3214 ft, Oswego 2800 ft, show 2870-85 ft, Miss. 3220-3620 ft, Hominy Wx. 3640 ft, Arb. 3668-3714 ft, abnd 3714 ft.

Lincoln County: Peck—Allied Mat.'s Peck 2, ne se nw 35-14n-6e, 2nd Wilcox 4180 ft, td 4193 ft, shot 50 qts, pumped 96 bbls oil.

Lincoln County: Unnamed—R. L. Kemp et al's Francis 1, ne se sw 26-17n-6e, abnd 2659 ft.

Logan County: Guthrie—Continental's Suits 2, se sw nw 7-17n-1w, 2nd Wilcox 5486 ft, td 5490 ft, flow 658 bbls; Suits 5, sw sw nw 7-17n-1w, Bartlesville 5112 ft, td 5134 ft, flow 281 bbls. McBride's Eastwood 2, se nw sw 7-17n-1w, 2nd Wilcox 5475 ft, td 5496 ft, flow 1146 bbls. Sunray Oil Co.'s Donoghue 3, sw nw se 7-17n-1w, 2nd Wilcox 5444 ft, td 5450 ft, flow 1020 bbls; Donoghue 4, ne nw se 7-17n-1w, 2nd Wilcox 5420 ft, td 5422 ft, flow 2600 bbls.

Logan County: Lovell—Dancinger's Knecht 1, se nw se se 21-18n-4w, 2nd Wilcox 6240 ft, td 6249 ft, pb 4830 ft, abnd. H & P Gas Co.'s Harmon 1, c se se 33-18n-4w, Layton 4806-56 ft, td 4863 ft, 6,000,000 gas.

Logan County: South Lovell—H & P Gas Co.'s Matherson 3, c ne sw 34-18n-4w, Layton 4820 ft, td 4870 ft, 12,000,000 gas.

Muskogee County: Wildcat—France Paris' Clark 1-A, c e l se ne 32-13n-19e, abnd 1202 ft.

Noble County: Wildcat—M. M. Travis' Adriance 1, c nw sw 27-23n-2w, Hoover 2339 ft, abnd 2408 ft.

Okfuskee County: Gregory—Wells' Fletcher 3, se se se 24-10n-11e, Booch 1995-2015 ft, td 2015 ft, shot 40 qts, pumped 15 bbls.

Okfuskee County: E. Cromwell—Shell's Tiger A-3, sw ne sw 35-11n-8e, Cromwell 3402 ft, td 3429 ft, acid 1500 gals, shot 8 qts, flow 9321 bbls.

Okfuskee County: Sheldon—W. O. Goodwin's Brown 1, sw c ne 24-12n-11e, sand 1785-90 ft, abnd 1790 ft.

Okfuskee County: Wildcat—John Droppleman et al's Dolly 1, ne ne sw, Dalv. 2385 ft, brown lime 4530 ft, Booch 3535 ft, Crom. 3710-31 ft, no show, Pitkin 3782 ft, abnd 3874 ft.

Oklahoma County: Oklahoma City—British-American's Shields 2, ne c nw sw 15-11n-3w, Wilcox 6433 ft, td 6517 ft, shot with 120 qts, pump 477 bbls; Shields' 3, ne se nw sw 15--11n-3w, Wilcox 6410 ft, td 6510 ft, pb 6512 ft, pump 205 bbls.

Okmulgee County: Aztec—M. W. Lee's Derisaw 2A, 100 ft e c s½ ne 31-12n-12e, Senora 1164 ft, td 1218 ft, shot 30 qts, pump 18 bbls.

Osage County: Cleveland—Ray O'Neal's 1A, se c ne 11-21n-8e, Cleveland 1580 ft, td 1592 ft, shot 20 qts, pump 12 bbls oil and 10 bbls water.

Osage County: Osage City East—Ohio Osage & Moore's 34, c n½ sw sw 9-21n-9e, Miss. 2290 ft, td 2646 ft, pb 2534 ft, 1,500,000 gas. Moore Oil Co.'s 2, se sw sw nw 11-21n-9e, Hominy 2729-36 ft, td 2842 ft, shot 70 qts, abnd.

Osage County: Avant—Sinclair Prairie's 51, ne sw se ne 19-23n-12e, Bartlesville 1490-1618 ft, pay 1593-1618 ft, shot 40 qts, td 1638 ft, pump 30 bbls.

Osage County: Naval Reserve—Lewis & Texas Co.'s St. John 3, c s½ se nw 17-24n-7e, sand 2602 ft, td 2602 ft, swab 1 bbl oil, abnd.

Osage County: Happy Hollow—F. M. Penny's 9, c s l sw ne se 15-24n-8e, chert 2251 ft, pay 2285-2311 ft, td 2316 ft, pb 2292 ft, shot 72 qts, pump 50 bbls oil.

Osage County: West Barnsdall—A. G. Oliphant's 2, ne se ne sw 11-24n-10e, Bartlesville 1899-1964 ft, td 1966 ft, pb 1964 ft, shot 240 qts, pump 65 bbls.

Osage County: Pearsonia—Stanolind's 8, nw se sw 17-27n-8e, Miss. 2441 ft, abnd 2471 ft.

Osage County: Wildcat—Norbla et al's Osage 1, sec se se 29-21n-10e, Cleveland 1260 ft, hole full water 1283 ft, Skinner 1880-95 ft, salt water, Bartlesville 1973-2082 ft, show gas 1980 ft, dead oil 1992 ft, Miss. 2165 ft, Wilcox 2461-71 ft, Arb. 2562 ft, abnd 2606 ft in Arb.

Pawnee County: Unnamed—Johnson O&G's Eichelberger 1, sw ne se sw 10-20n-7e, Bartlesville 2500 ft, td 2503 ft, perf, pump 20 bbls oil and 1,000,000 gas.

Payne County: Wildcat—Kemp et al's McLaurey 1, 30 ft e of se se sw 28-17n-5e, 2nd Wilcox 3988 ft, abnd 4002 ft.

Payne County: East Orlando—Mid-Cont. Gas & Fuel's U. S. Dept. Agr. 1, sw sw nw

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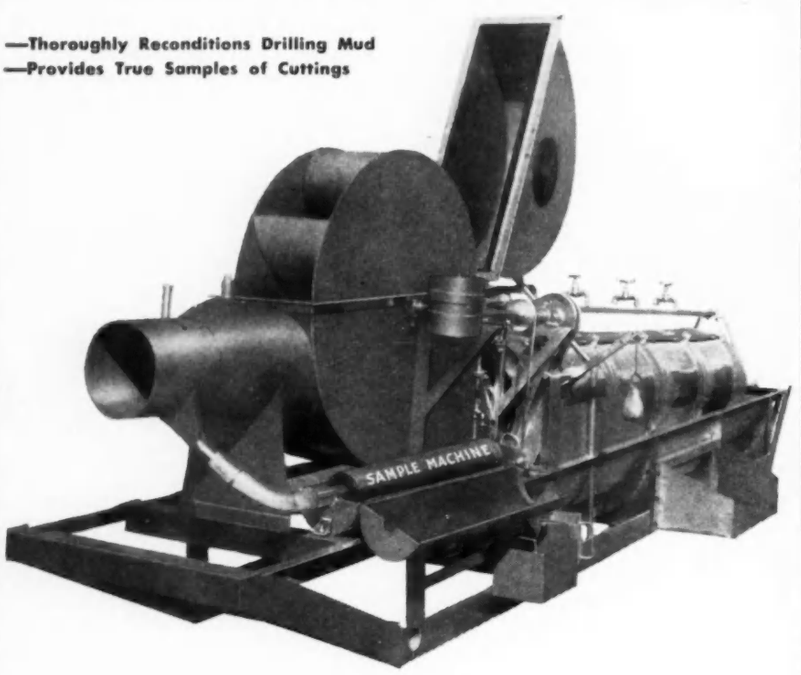

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12-19n-1w, Misener 4713 ft, td 4913 ft, pb 4720 ft, abnd.

Pottawatomie County: S. Konawa—Champlin's Robnett 1, ne ne ne 17-5n-5e, Hunton 2202 ft, pay 2437-49 ft, td 2460 ft, acid 2000 gals, flow 504 bbls.

Pottawatomie County: W. Hotulke—Sinclair Prairie's Boyd 2, se ne se 21-9n-4e, Viola 4443 ft, td 4691 ft, pb 4493 ft, perf, 3000 gals acid, pump 310 bbls.

Seminole County: Dora—D. Malernee's Hamrick 3, nw sw nw 34-7n-6e, Earlsboro 2755 ft, td 2817 ft, shot 60 qts, flow 50 bbls.

Seminole County: Unnamed—Mobud's Kidd 2, nw se se 33-10n-8e, sand 2075-81 ft, td 2153 ft, shot 72 qts, pump 15 bbls oil, 15 bbls water.

Seminole County: N. Cromwell—Shell's Curry 1, nw se se 27-11n-8e, Hunton 4020 ft, td 4100 ft, pb 3461 ft, abnd.

Seminole County: S. Dill—Shell's Keys B-2, se sw ne 22-11n-8e, Hunton 4064 ft, td 4110 ft, acid 3000 gals, flow 356 bbls.

Seminole County: Wildcat—Mobud Oil Co.'s Replogle 1, ne ne nw 34-10n-8e, through Senora sand no show, abnd 2150 ft.

Stephens County: Woolsey—Fair Operating Co.'s Baker 1-B, c se nw ne 35-2s-6w, lime 1819-40 ft, td 1840 ft, pb 1837 ft, abnd; Baker 2-B, ne nw ne 35-2s-6w, Arb. 1928-45 ft, abnd 1945 ft..

Tulsa County: Leonard—Abe Pepis' Harris 1-A, sw nw se 33-17n-14e, Wilcox 1867-90 ft, abnd 2124 ft, hole full water.

Tulsa County: Bird Creek—Kenner Oil & Gas' Walker 14, c sw nw 18-21n-13e, sand 1127 ft, td 1170 ft, shot 140 qts, pump 5 bbls. Bird Creek's Rice 1, c nw se 30-22n-13e, sand 1810 ft, abnd 1862 ft, hole full water.

Wagner County: Unnamed—Geo. Lockwood's Gilbert 1-A, sw sw sw 20-17n-17e, Wilcox 1100-05 ft, abnd 1294 ft. C. K. Minter's Parkerson 1, sw nw sw ne 29-18n-17e, abnd 420 ft.

OLD WELLS DEEPENED

Carter County: Hewitt—W. H. Smith's Ward 4, 220 ft s c s½ se se 18-4s-2w, otd 2161 ft, td 2310 ft, sand 2111-2220 ft, shot 100 qts, pump 432 bbls.

Osage County: Osage-Hominy—Pure's 127, nw ne sw 8-23n-8e, otd 2163 ft, td 2511 ft, Miss Chat 2469 ft, pump 40 bbls.

Pottawatomie County: St. Louis—Elko's Cardwell 3, ne sw nw 15-7n-4e, otd 4197 ft, Simpson dense 4155 ft, Dolomite 4286 ft, td 4308 ft, acid 5000 gals, pump 80 bbls.

Seminole County: Little River—Sinclair Prairie's Sunny 7, sw ne nw 14-7n-6e, otd 4265 ft, td 5016 ft, pb 4359 ft, pump 189 bbls oil.

Stephens County: Velma—Skelly's Steifel 3, ne sw nw 35-1s-5w, otd 723 ft, sand 709-23 ft, sand 741-53 ft, td 765 ft, shot 20 qts, pumped 6 bbls.

WILDCAT STARTS

Cleveland County—Luther Mayes et al's Mullman 1, nw nw nw 22-10n-1e, dk. Mayes 1, ne ne nw 33-10n-1e, lcn.

Hughes County—Mid-Continent Oil Co.'s Rinn-Peters 1, nw ne sw 11-9n-8e, dr.

Kay County—Helmerich & Payne's Kregor 1-A, se se ne 4-25n-2w, dr.

Okfuskee County—Olson Drlg. Co.'s Armstrong 1, ne ne ne 3-11n-10e, dr. Summit Drlg. Co.'s Ruch 1, nw nw sw 14-12n-10e, dr.

Osage County—Blackwell's O&G et al's Osage 1, 28-28n-8e, lcn.

Kansas

New Producing Zone in Rice; Prospect in Sumner County

New producing zone opened in Rice County; another new field looms for Sumner County; Frog Hollow field gets substantial extension; Barber County wildcat logs favorable shows in two oil zones.

Rice County: Nelson Drilling Co.'s Smyres 1, NEc SW 36-19s-6w, 2 mi south of Windom, test drilled to 3354½ ft in chat topped at 3321 ft, 7-in 3322 ft, drilled plug, hole filled 3000 ft with oil overnight, opened up made heavy flow over mast then shut in for tanks.

Sumner County: E. B. Shawver's Kemp 1, SEc 8-35s-2e, west of Padget district and only a few miles from Oklahoma line, apparently has opened a new oil pool, well drilled to dry Arbuckle dolomite, plugged back, perforated Mississippi chat 3357-400 ft, well flowing 40 to 50 bbls oil daily, operator still testing.

Cowley County: B. B. Blair's Pruett 1, NW SE NE 14-32s-5e, extended Frog Hollow field ½-mi to the east, drilled to 3044 ft in Bartlesville sand, well made 188 bbls oil in 24 hrs on official potential.

Barber County: Champlin Refining Co.'s Hildebrandt 1, CE½ NW NW 26-32s-15w, 12 mi southwest of Lake City pool, cored to 5191 ft in Arbuckle dolomite for no shows, coring ahead, test earlier logged apparently commercial shows in Simpson series at 5041 ft, other small shows were found in Viola lime at 4931 ft, Mississippi lime at 4740 ft and Kansas City-Lansing lime topped at 4160 ft.

Barton County: Luther Mackall's Disque 1, NWc 23-17s-11w, 1 mi south of Trapp pool, topped Arbuckle lime 3301 ft, cored saturation and was waiting with casing set at 3301 ft.

COMPLETIONS

Barton County: Trapp—Skelly's Susank 1, nw nw ne 19-16s-13w, Lansing 3123 ft, td 3352 ft, pb 3332, perf 4900 gals acid, pumped 506 bbls oil and 25 bbls water.

Barton County: Wildcats—J. J. Lynn's Kraft 1, c s½ se nw 36-16s-11w, Lansing 3032 ft, Congl 3340 ft, reworked Arb. 3348 ft, Arb. 3357 ft, show oil 3357-58 ft, cored 3358-70 ft, show oil 3369-70 ft, 5-in 3356 ft, sat 3357-70 ft, td 3370 ft; 1200 ft oil in hole 9 hrs, 2000 gals acid, pump 5 bbls oil per hr, completed for 544 bbls oil, grav 42. Sinclair Prairie's Kowalsky 1, c n½ ne sw 32-20s-11w, Topeka 2715 ft, Lansing 3140 ft, Arb. 3377 ft, Sat. 3377-79 ft, cored 3379-84 ft, 1900 ft oil in hole, 7000 gals acid, completed 154 bbls oil, 72 bbls water, grav 49.8

Barton County: Ainsworth—Stanolind's Kultgen 5, c n½ ne ne 26-16s-13w, td 3424 ft, Arb. 3409 ft, 3500 gals acid, pumped 82 bbls oil, 19% water.

Barton County: Kraft—Carter's Burmeister 3, c e½ sw nw 2-17s-11w, Arb. 3330 ft, td 3346 ft, 3000 gals acid, pump 423 bbls. Shell's Burmeister 5, se nw ne se 3-17s-11w, Arb. 3303 ft, td 3314 ft, potential 3000 bbls.

Barton County: Wildcat—E. Wakefield's

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Wolf 1, c s½ sw ne 4-20s-11w, Arb. 3335 ft, abnd 3342 ft.

Butler County: El Dorado—Allbe O&G's Porter 57, ne se nw 6-26s-5e, Kansas City 2017 ft, td 2026 ft, 500 gals acid, pump 40 bbls.

Butler County: Keighly—Rex-Morris' De-Moss B 4, se ne sw 5-28s-7e, Bartlesville 2675 ft, td 2723 ft, shot 100 qts, pump 25 bbls.

Ellis County: Bemis—Cities Service's Callahan C 8, c e½ se se 24-11s-17w, Arb. 3340 ft, td 3353 ft, 1000 gals acid, 3000 bbls. Deep Rock's Baumer 26, c w½ sw se 27-11s-17w, Arbuckle 3576 ft, td 3593 ft, 4000 gals acid, 2540 bbls.

Ellsworth County: Bloomer—Skelly's Moran 10, c np np se 31-17s-10w, abnd 723 ft.

Ellsworth County: Virgil—Aikman et al's Koenig 2, c e½ e½ sw 27-22s-13e, Miss. 1862 ft, td 1886 ft, 1500 gals acid, shot 20 qts pump 5 bbls oil, 20 bbls water. Oko O&G's Shevel 22, se ne nw se 15-23s-13e, Miss. lime 1775 ft, pay 1779-1803 ft, td 1803 ft, 2000 gals acid, pumped 35 bbls.

Jefferson County: McLouth—Hatcher & Fisk's Fowler 1, c se nw 32-9s-20e, Miss. lime 1540 ft, abnd 1544 ft. Berentz & McLaughlin's Knudson 1, c se nw 33-9s-20e, Miss. lime 1492 ft, td 1503 ft, 0.7 MG. Apperson et al's Bower 1, se se ne 5-10s-20e, Miss. 1440 ft, td 2288 ft, pb to 1612 ft, pump 200 bbls. Hatcher & Fisk's Kimmer 1, c s½ se sw 5-10s-20e, Top sand 1538 ft, td 1563 ft, .75 MG. E. V. Jackson's McLeod 2, ne sw sw se 5-10s-20e, top sand 1479 ft, td 1504 ft, 3 MG.

Jefferson County: Wildcats: E. V. Jackson's Sheldon 1, c ne se 14-9s-19e, base KC 888 ft, Bartlesville 1645 ft, Miss. 1699 ft, td 1749 ft, hole full water, abnd. E. V. Jackson's Northwestern Mutual 1, c e½ se ne 24-9s-19e, Miss. 1595 ft, td 1734 ft, abnd. Workman & Sherrod's Rilling 1, sw sw se 22-10-19e, Oread 194 ft, B. Herta 660 ft, sand 1550-59 ft, Bart. sand 1551-60 ft, td 1604 ft, pb 1550 ft, abnd.

Leavenworth County: McLouth—Longwell et al's Bankers Life 4, sw ne sw 3-10s-20e, sand 1413 ft, td 1456 ft, shot 60 qts, est pump 40 bbls.

Marion County: Lost Springs—Ring-Mac's Jarak 2, c e½ ne nw 4-18s-4e, Miss. 2371 ft, td 2396 ft, pumped 396 bbls.

McPherson County: Chindberg—Geo. Hess et al's Ek 1, sw sw ne 24-19s-3w, Kansas City 2343 ft, abnd 2375 ft.

Phillips County: Dayton—Carter's Dusin 1, c ne se 35-2s-19w, Lansing 3148 ft, td 3344 ft, 3200 gals acid, 1673 bbls oil.

Reno County: Peace Creek—Cities Service's Snowberger 3, ne nw nw 22-23s-10w, Viola 3782 ft, td 3786 ft, 500 gals acid, 3000 bbls.

Rice County: Genesco—Continental et al's E. B. Ainsworth 8, ne se se 24-18s-8w, Arb. 3110 ft, td 3184 ft, 3000 bbls.

Rice County: Silica—Phillips' Wesley 3, c w½ e½ se 35-19s-10w, Arb. 3280 ft, td 3288 ft, 500 gals acid, 3000 bbls oil.

Rice County: Raymond—Herndon Drlg. et al's Kelly 1, c w½ ne sw 15-20s-10w, Arb. 3395 ft, td 3397 ft, pumped 46 bbls.

Rice County: Unnamed—H. C. Bennett et al's Hand 1, c e½ e½ 21-22s-9w, Misener 3312 ft, pay 3318-3322½ ft, td 3322½ ft, 13,860 MG.

Russell County: Greenvale—Cities Service's Major B 3, c w½ ne se 5-15s-12w, Gorham 3227 ft, td 3249 ft, shot with 10 qts pumped 139 bbls.

Russell County: Wildcat — Central Pet.'s Luermann 1, c n½ nw sw 29-15s-12w, Arb. 3355 ft, td 3378 ft.

Russell County: Forest Hill—El Dorado Ref.'s Steinle 1, c w½ ne ne 29-15s-12w, Arb. 3318½ ft, td 3327 ft, 500 gals acid, pumped 410 bbls.

Russell County: Trap—Leader Oil's Berry 3, sw se ne 33-15s-13w, Arb. 3330½ ft, td 3342 ft, 1000 gals acid pumped 105 bbls oil, 50% water.

Rice County: West Trapp—Phillips et al's Krug 3, nw sw se se 15-15s-14w, Arb. 3319 ft, td 3324 ft, 3300 gals acid, pumped 27 bbls oil, plus 90% water. Cities Service's Bender C 4, c n½ ne nw 26-15s-14w, Arb. 3354 ft, td 3357 ft, 500 gals of acid, pumped 98 bbls.

Stafford County: Beford—Cities Service's Knoche 4, se nw se 28-23s-12w, Arb. 3860 ft, abnd 3867 ft.

Stafford County: Stafford—Stanolind's Crawford 7, c w½ nw ne 15-24s-12w, Viola 3838 ft, td 3848 ft, 3000 gals acid, 3000 bbls.

Stafford County: Wildcat — Iron Drlg.'s Findlay 1, c w½ nw se 6-24w-12w, Anhy. 719 ft, Topeka 2995 ft, Lansing 3499 ft, Base K.C. 3753 ft, Congl 3759 ft, rework Viola 3785 ft, Viola 3828 ft, Simpson 3940 ft, abnd 3941 ft.

Sumner County: Wildcat—E. B. Shawver's Kemp 1, se se se 8-35s-2e, Stalnaker 2320 ft, Layton 2724 ft, Miss. 3360-64 ft, odor oil, Miss. 3405 ft, Wilcox 3573-3611 ft, Simpson 3573 ft, Arb. 3668 ft, td 3697 ft, pb 3405 ft, 10 qts, flow 30 bbls.

WILDCAT STARTS

Barber County—Luther Mackall's Hoss 1, c n½ nw nw 12-30s-15w, mim.

Jefferson County—W. D. Dunn's Boyd 1, ne ne se 22-8s-19e, cellar. W. D. Dunn et al's Everett 1, se se sw 36-8s-19e, dr.

Kingman County—Stanolind's Tredick 1, c w½ nw sw 28-29s-7w, lcn.

Leavenworth County — Frank Whitten's Courtney 1, c sw ne 15-9s-20e, dr. McLaughlin's Miller 1, c ne se 22-10s-20e, dr.

Rice County—Brunson Drlg.'s Ringuald 1, c n½ ne nw 32-18s-10w, ponds.

Rooks County—Stanolind's Boller 1, cwp ne nw 32-8s-16w, mim.

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Nebraska

Eighth Producer Added In Growing Barada Pool

Eighth producer added to Barada pool which looms as state's major area; Pawnee County wildcat temporarily abandoned; activity in Falls City Field at standstill.

Richardson County: Skelly Oil Co.'s Zimmerman 1, CW¼ SE SW 36-3n-16e, being completed as eighth producer for the Barada pool; topped Hunton lime at 2454 ft, drilled to 2508 ft, perforated casing, filled 1000 ft in first hr and 1980 ft in 2 hrs, 40 min., now testing. Operator's Mack 1, CW¼ SW SW 25-3n-16e, in northern portion of field, set casing at 2480 ft, td, after coring saturation in the Hunton lime.

Pawnee County: Henry Blaser's Wilson 1, NE NW NW 4-1n-10e, drilled to 903 ft in Granite wash and was temporarily abandoned.

COMPLETIONS

Harlan County: Wildcat—Veeder Supply & Best's Battin 1, c n½ se ne, Lansing 3385 ft, show oil 3385-90 ft, and 3540-60 ft, Congl 3770 ft, Viola 3858 ft, Simpson 3985 ft, Arb. 4046-42 ft, td 4208 ft, 7-in, 3631 ft, ripped casing 3585-92 ft, 3575-80 ft, 3541-65 ft, rainbow show oil, pig 3575-80 ft, 3575-92 ft, filling hole 35 ft per hr, 10% oil, est 5 gals oil hr and lots water, ripped 2481-85 ft, 3415-24 ft, 3385-92 ft, 4000 gals acid, est, pump 75 to 1000 bbls fluid per day, 85% water.

Richardson County: Falls City — Ohio's Busholtz 9, nw se ne sw 17-1n-16e, Hunton 2228 ft, td 2309 ft, perf, 500 gals acid, pump

60 bbls oil 340 bbls water; Busholtz 10, ne nw ne sw 17-1n-16e, Hunton 2260 ft, td 2360 ft, pb 2279 ft, perf, 500 gals acid, abnd; Busholtz 11, c w½ w½ 17-1n-16e, Hunton 2289 ft, td 2307 ft, abnd.

WILDCAT START

Thayer County—R. R. Dutton et al's Keerwitz 1, nw nw nw 16-2n-2w, rig.

New Mexico

Two Lea County Wildcats Indicate Pump Producers

Lea County has two wildcats nearing completion as pumpers. Failure on northwest edge Monument field. Maljamar expanded east.

Wildcats: Culbertson & Irwin and Southern California Petroleum Corp.'s Lynch-Texaco 1, C SW SW 21-19s-32e, 4 miles north of Halfway pool, developed hole full of 27-gravity oil after drilling plugs from 7-in at 2696 ft. Production from sandy-lime 2740-51 ft, and hole filled 2400 ft with oil before running pipe. Logged top brown lime 2415 ft and Yates 2550 ft, elev 3580 ft. Phillips Petroleum Co.'s State-Philmex 1, C NW NW 28-17s-33e, 2¾ miles east by south of Maljamar field, was swabbing one barrel oil hourly after 50-qt nitro shot 4570-87 ft, total depth 4592 ft, and re-acidizing with 2000 gallons. Prexy Wilson et al's Saunders 1, C SE SE 11-25s-35e, fishing tools 2245 ft.

Lea County: Skelly Oil Co.'s State-Monument 3, C NW NW 13-19s-36e, northwest outpost Monument field, abandoned with hole full water 4480-4500 ft, elevation 3730 ft. Drilling & Exploration's Johns-Emperor 2-A, east outpost for Maljamar field, flowed 88 bbls 22 hours natural 5/16-in choke broken pay 4120-4318 ft.

COMPLETIONS

Eddy County: Wildcats—P. B. English et al's Jones 1, c se ne 24-19s-31e, new pool, elev 3554 ft, base salt 2230 ft, pump 130 bbls natural 32-gr, Permian 2461-70 ft. Keyes-Atwood et al's Keyes 1-B, nec se 33-20s-30e, elev 3366 ft, salt series 537-1323 ft, Yates sand 1526 ft, abnd sulphur water 1755-56 ft.

Eddy County—W. D. Cunningham et al's State-Featherstone 1, ne se ne 25-17s-27e, abnd 525 ft. E. L. Fulton et al's State-Conklin 1, swc ne 36-17s-27e, pump 20 bbls, acidized 1000 gals, 507-33 ft. Grayburg Oil Co.'s Burch 3-B, c nw sw 23-17s-30e, flow 150 bbls ¾-in, acidized 1000 gals, 2710-2864 ft. R. J. Johnston et al's Harbold 4, sw se ne 35-17s-27e, pump 30 bbls, acidized 1500 gals, 402-66 ft. Polyhar-McNutt et al's State 2, nwc sw 30-17s-28e, abnd 575 ft. Repollo's McIntyre 5-D, nw se ne 21-17s-30e, abnd 3740 ft. Williams-Polyhar et al's Barrentos 1, swc ne 35-17s-27e, pump 15 bbls, 402-72 ft.

Lea County: Maljamar—Barney Cockburn et al's Miller 10-A, c ne se 23-17s-32e, flow 60 bbls natural 2-in, 3887-4085 ft. Maljamar O&G Corp.'s Mitchell 16-B, c sw sw 19-17s-32e, flow 110 bbls natural 2½-in, 3538-70 ft, td 3609 ft. W. J. Rutledge Jr. et al's Pearsall 1-A-a, c nw sw 33-17s-32e, flow 132 bbls ⅝-in, shot 60 qts, 3475-90 ft.

Lea County: Salt Lake—Continental et al's Brooks 2-A-7, c se sw 7-20s-33e, flow 233 bbls natural 2½-in, 3045-75 ft.

Lea County: Vacuum—Phillips' State-Santa Fe 49, c ne ne 29-17s-35e, flow 84 bbls 2-in, acidized 5000 gals, 4360-4691 ft.

North Texas

Montague County Deep Well Makes Good Flow

Montague County deep well makes big flow. Clay County prospect running pipe for test. More pay logged by Archer County wildcat, and Ellenberger failure near Sunshine Hill.

Montague County: Larry Hults and Tom B. Owens' Brite 1-a, northwest offset their discovery in Hults-Owens pool, flowed 150 bbls oil hourly through casing after drilling plugs from 5½-in 6030 ft, with conglomerate saturation to 6058 ft in Bend, topped at 6036 ft. Later averaged 120 bbls hourly during 2-hr test while running tubing. This third producer for pool is twin to 6029-ft junked hole, and is north offset to well that was junked while in process of completion.

Clay County: H. L. Hunt, Continental and Roy Lee's Watson 1, W. A. Farris Survey, A-148, and 1¾ miles north of Antelope multi-pay pool, set pipe to try for completion in Basal Bend after drill-stem at 5455-84 ft yielded 330 ft oil and 150 ft oil and gas-cut mud with 2480 pounds bottom-hole pressure. Credited with entering Bend at 5198 ft, being 202 ft low when correlated with same marker recorded by single Bend producer in Antelope pool. L. T. Burns et al's Wynn 4, confirmation well for Burns-Wynn pool, killed with mud to land tubing, then flowed 357 bbls natural 6 hours ¾-in. Production from perforations 6088-94 ft in Mississippian, topped 5873 ft, being 24 ft high.

Wildcat Failures: Superior Oil Co.'s Scaling 1-A, western Clay County, failed to make commercial yield after progressively testing Ellenberger and Bend zones, total depth 5865 ft. In Sunshine Hill area, northern Wichita County, Geo. Proctor and W. B. Omohun-

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dro's Obenhaus 1, entered Ellenberger 3905 ft, and extremely hard dolomite to 4045 ft.

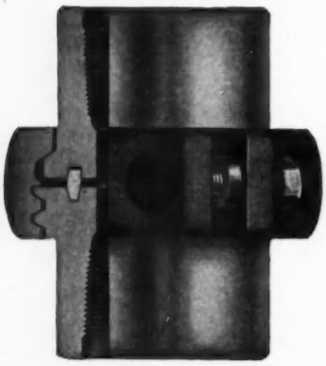
Archer County: Continental's Ferguson 1, midway between K-M-A and Hull-Silk fields, attempting complete drill stem test in oil-saturated lime at 4468-80 ft in Bend, topped 4468. This wildcat logged ample oil saturation at intervals in Strawn, topped 4038 ft, to warrant running pipe for production test. Roy Lee, Trustee's Heden 1, SW NW SE Sec 14, ½-mile east of Strawn production in Griffin-Kadane pool, flows by heads through partially collapsed casing and disconnected tubing. Production from sandy-lime 4356-70 ft, top lime between 4084-4100 ft. Sinclair Prairie's Coleman 1, wildcat on east edge county and on geophysical prospect, drilling 3950 ft.

Jack County: Anderson-Prichard Oil Corp.'s Hoefle-Conkling 1, north offset to Hoefle pool discovery, flowed 218 bbls oil 18 hours after using 2000 gallons acid at 4856-70 ft, total depth 4883 ft, in Bend, topped 4846 ft. Well flowed natural, but declined sharply. Hanlon & Buchanan, Inc.'s Hoefle 1-B, south offset to discovery, showed very little oil when swabbed down, and is awaiting results of acid treatment. Logged broken saturation 4867-4906 ft in Bend, topped at 4867 ft, 5 ft high.

COMPLETIONS

Archer County: Scotland—R. H. Hawn et al's Edwards-Texaco 2, nwc ATNCL 33, pump 120 bbls, acidized 2000 gals, Bend 5229-50 ft, td 5775 ft, plugged back from dry Mississippian 5729 ft. Shell's Coleman 8-A, se sw ATNCL 74, flow 1304 bbls 2-in, acidized Bend perf 5026-58 ft, td 5127 ft.

Archer County—Jess L. Alexander et al's White 5-A, lot 12, ATNCL 34, abnd 1001 ft.



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Henry Grace et al's Wilson 6-B, lot 1, ATNCL 87, abnd 1448 ft.

Clay County: Wildcats—H. S. Gray et al's Culver 1, 1300 ft from w and 150 ft from s lines blk 33, Specht-McCutchen sur, abnd 1300 ft. Jack Story Jr et al's Brock-Texaco 1, 1331 ft n and 150 ft e sec Byers subdiv 84, but in Alex McGown sur A-319, abnd 1365 ft. Shell's Maddox 1-A, 2272 ft from n and 2114 ft from w lines T. M. Hughes sur A-179, Merryman 2450 ft, Bend 5448 ft, Ellenberger 5543 ft, junked 5700 ft. Akin-Dimock-Costley's T. J. Wells 1, swc blk 32, Specht-McCutchen sur, abnd 1355 ft.

Clay County—Akin-Dimock-Costley's Saner 6-A, blk 5, Pratt subdiv, pump 37 bbls, sand 1104-22 ft. J. B. Cunningham et al's Boddy-Texaco 2, HT&B Ry sur A-222, abnd 301 ft. Darby-Lynde Co.'s Stine 1-B-40, Byers subdiv 7, 2 bbls oil, 1724-38 ft, td 1795 ft. M. Hudson et al's Taylor 2, Bacon subdiv 40, abnd 1320 ft. Johnson & Kouri's Taylor-Elliott 12, Bacon subdiv 56, pump 50 bbls, sand 1130-40 ft. Metzner & Burns' Thornberry 29, Thornberry subdiv 11, abnd 1305 ft.

Montague County: Ringgold—Stanolind's Seay 1, sec H&TC 31, blk 4, flow 372 bbls 46-gr oil ½-in natural, Bend conglomerate, perf 5808-23 ft, td 5935 ft.

Throckmorton County—Walter Neustadt et al's McKeichan 1-A, J. S. Wright sur A-1283, pumped 7 bbls natural 617-35 ft, td 640 ft; McKeichan 3-A, J. S. Wright sur, abnd 726 ft.

Wichita County—W. H. Hammon-Hanlon-Buchanan's Fassett-Tuttle 49-F, E. T. Ry sec 1, A-76, pump 15 bbls 619-20 ft. J. W. Hastings et al's Ramming 3, H. Hastie sur A-92, pump 71 bbls 1208-20 ft. Chas. E. Morrison et al's Powell 3, H&GN Ry sec 21, A-142, pump 12 bbls 804-42 ft, td 910 ft.

Wichita County: K-M-A—Geo. W. Cooper et al's Waggoner Est. 34-E, A. Gibson sur, abnd Ellenberger 3613-3764 ft. F. W. Merrick's Jones 10, BS&F A-485, pump 220 bbls, shot 200 qts 4050-4114 ft. Hanlon & Buchanan's Fassett-Tuttle 29-E, SA&MG A-582, flow 424 bbls 21/64-in, acidized and shot 145 qts 4010-44 ft.

Wilbarger County—Summit Oil Co.'s Waggoner 7, nwc w½ se H&TC 14, blk 13, pump 6 bbls, shot 10 qts 1694-1700 ft.

Young County—H. B. Streit et al's Jack 7-A, blk 23, Young CSL A-1284, pump 7 bbls natural 534-58 ft. R. L. Wheelock Jr. et al's Pace et al 1, A. Rohus sur A-2401, abnd 690 ft.

GAS INPUT WELL

Young County—H. B. Streit et al's Jack 11-C, blk 23, Young CSL A-1284, td 555 ft.

WILDCAT STARTS

Archer County—Shell's J. F. Ebnother 1, 920 ft from n and 150 ft from e lines blk 102, Harris Club Ranch, elev 1078 ft, mim.

Clay County—Fain-McGaha Oil Corp.'s Huff 1, 900 ft from n and 1150 ft from e lines J. Bradshaw sur A-17, lcn.

Willbarger County—W. H. Peckham et al's Waggoner Est. 1, swc se H&TC 49, blk 4, lcn 3000-ft test.

West Texas

Pecos County Wildcat Showing Delaware Oil

Delaware prospect in Pecos County heads after initial nitro shot. Pair Ordovician wildcats assigned Sterling County. Middle Permian oil zone on northeast edge Abell field accounts for more wells.

Delaware Strike: Pure Oil Co.'s T. P. Land Trust 1-A, western Pecos County, flowed oil by heads at intervals through cavings after 60-quart nitro shot 5255-71 ft, plugged back from 6001 to 5274 ft. Second shot of 59 quarts in upper Delaware 5080-96 ft pending. This wildcat gave promise of making small well while drilling through Delaware, topped at 5082 ft, elevation 3311 ft. Gulf and Lou Wentz's Millar 2, temporarily completed late last month in Ellenberger broken saturation 4307-83 ft, was coring at 4459 ft wtihout any appreciable gain in pay. Magnolia's Price 1, southeast corner N½ H&GN 4, Blk 12, 6 miles east by north of Millar 2, drilling 2860 ft, logged evidence gas at 2790-2800 ft and 2825-40 ft, elevation 2313 ft.

Abell Permian: Stanolind's Rathjen-Simmons 1, south offset to its discovery completion for the 3900-ft zone, flowed 330 bbls natural ½-in choke 24 hours, perforated 3900-18 ft. Tide Water Asso-

ciated Oil Co.'s Lutz 1, east offset the discovery, flowed 429 bbls initial ½-in, pay 3938-50 ft. Magnolia's Erickson-State 1, west offset to discovery, pumped 79 bbls oil initial, acidized through perforations 3850-80 ft. Stanolind's Kistler 1, near C N¼ W¼ H&TC 5, Blk 3, south outpost for Simpson production in Abell field, flowed rate 60 bbls oil hourly on brief drill-stem test at 5301-35 ft.

Sterling County: Steve Currie and E. M. Wahlenmaier contracted to drill 7000-ft Ordovician test 12 mi southeast Sterling City on acreage farmed out by Sun Oil Co. Gulf made location for an 8000-foot project 2 miles south of same town. Majors have been assembling large lease blocks in Sterling and Southeastern Glasscock Counties for considerable period in anticipation of Pennsylvanian and Ordovician development. Activity has advanced south and across Crockett and Schleicher Counties.

Wildcats: Fullerton Oil Co.'s Wilson 1, Andrews County wildcat that passed up oil flow in Clear Fork section of Permian, was drilling at 7960 ft to contract before running pipe. Forest's University 1, Andrews County, abandoned in sulphur water 4384-4448 ft. Phillips Petroleum Co.'s University-Andrews 1-A, Ordovician project for Southern Andrews County, fishing stem 3750 ft. In Southern Winkler County, Stanolind's Sealy 1 awaiting orders after recovering sulphur water and gas-cut mud on drill-stem 3055-95 ft. Shell's Sealy-Smith 1, northeastern Ward County, drilling lime 8380 ft. In southwestern Lubbock County, Geo. Livermore's Moxley 1 coring 4990 ft.

COMPLETIONS

Andrews County: Emma—Sinclair Prairie's Cowden 15, nec T&P 12, blk 44, T-2-N, flowed 990 bbls 2-in, acidized 3000 gals 4180-4240 ft. Likins-Hall's University 2-B, se sw ne sec 36, blk 10, 1197 bbls natl 4295-4335 ft. Texas Co.'s University 3-J, sw nw sw sec 42, blk 9, elev 3159 ft, pumped 294 bbls, acidized 3000 gals, 4225-4335 ft.

Andrews County: Wildcat—Forest Development Corp.'s University 1, c nw nw sec 21, blk 9, elev 3194 ft, anhydrite 1840 ft, Yates sand 2950 ft, frosted grains 2970 ft, 1st lime 3745 ft, San Andres 4413 ft, abnd in sul water 4384-4448 ft.

Cochran County: Slaughter — Atlantic's Boyd-Humble 35, near c lab 11, leag 56, flow 1353 bbls 2-in, acidized 10,000 gals, 4950-5060 ft. Devonian Oil Co. et al's Duggan 11-A, sec lab 2, leag 55, flowed 1281 bbls 2½-in, acidized 11,000 gals, 4918-5033 ft, pb to 5023 ft. Honolulu Oil Corp.'s Dean 2, leag 58, Martin CSL, flowed 920 bbls 2½-in, acidized 10,000 gals, 4937-5036 ft; Dean 3, leag 58, flowed 1375 bbls 2½-in, acidized 10,000 gals, 4937-5036 ft; Dean 3, leag 58, flow 1375 bbls 2½-in, acidized 10,000 gals, 4940-5030 ft; Igoe-Smith 18, near c lab 13, leag 56, Oldham CSL, flow 985 bbls 2-in, acidized 10,000 gals, 4975-5033 ft. Magnolia's Mallet 7-A, swc lab 6, leag 50, Scurry CSL, flow 1024 bbls cas, acidized 11,000 gals, td 5043 ft; Woodley 22, nec lab 7, leag 57, flow 909 bbls cas, acidized 10,000 gals, 4935-85 ft. Stanolind's Boyd-Osage 16, 1522 ft from n and 1267 ft from w lines leag 53, Oldham CSL, flowed 127 bbls 2-in, acidized 7500 gals, 5023-88 ft.

Crane County: Gulf-Waddell—Gulf's Henderson 29, ne nw se PSL 4, blk B-23, flowed 1776 bbls 2-in, acidized 5000 gals, 3533-45 ft.

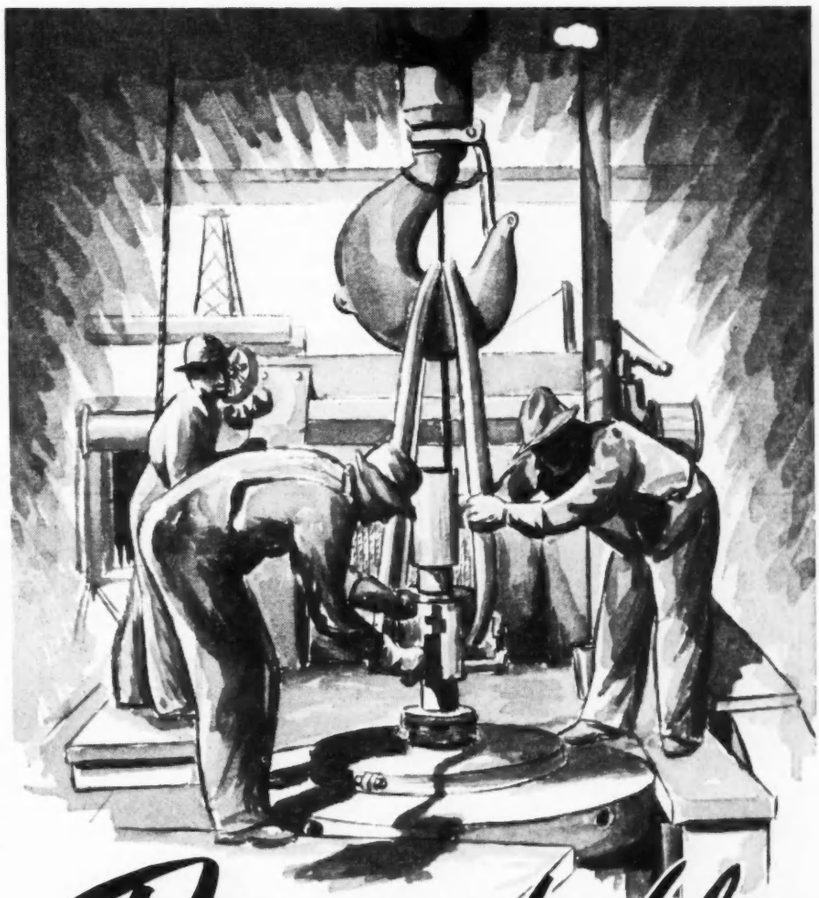
Crane County: Sand Hills—Magnolia's Lea 10, nec PSL 4, blk B-32, flow 317 bbls, on flow valves, acidized 5000 gals, 4530-4605 ft.

Ector County: Wildcat—T. P. Coal & Oil Co.'s Neatherly 1, c ne ne T&P 8, blk 41, T-1-S, elev 2962 ft, low on anhydrite, abnd 2302 ft.

Ector County: Foster — Sinclair Prairie's Johnson 32-B, se nw ne T&P 48, blk 43, T-1-S, flow 1064 bbls, 2-in, shot 430 qts, 4110-4230 ft.

Ector County: Judkins—R. G. Patillo et al's McKenzie-Sinco 1, swc ne T&P 28, blk 45, T-2-S, abnd, shot 150 qts 3699-3741 ft, td 3750 ft.

Ector County: North Cowden—Broderick & Calvert's Holt 2-B, se ne se T&P 13, blk 43, T-1-N, flow 386 bbls ¾-in, shot 97 qts 4331-62 ft, td 4370 ft. Stanolind's Cowden 79, near c e½ nw nw T&P 34, blk 43, T-1-N, flow 233 bbls 1-in, shot 110 qts 4140-4182 ft, td 4205



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ft, pb to 4187 ft. Stanolind-Magnolia's Holt 5, nw sw T&P 18, blk 43, T-1-N, flow 1764 bbls, 2-in, shot 970 qts, 4335-4675 ft.

Fisher County: McCauley—Brown-Gardner-Higginbotham's Parker 1, c ne sw HT&B 51, blk 1, pumped 35 bbls, acidized 4250 gals, perf 3059-75 ft, td 3336 ft. P. R. Long & F. A. Stevenson's Elvens 1, c ne nw HT&B 51, blk 1, pumped 148 bbls 41.6-gr oil, acidized 4250 gals, perf 3260-69 ft, td 3298 ft.

Gaines County: Wildcat—Amerada's Hudson 1, c nw nw PSL 60, blk AX, elev 3616 ft, anhydrite 2130 ft, Yates 3030 ft, Brown lime 4040 ft, San Andres 4560 ft, junked 5036 ft.

Gaines County: Cedar Lake—Mid-Continent Pet. Corp.'s Collett 1, north end triangle PSL 4, blk C-30, swabbed 485 bbls, shot 360 qts 4725-4805 ft, td 4818 ft. Stanolind's Johnson 3, c ne nw D&W sec 6, blk H, swabbed 582 bbls, shot 440 qts 4660-4775 ft.

Hockley County: Wildcats — Stanolind's Williams 1, sec lab 21, leag 717, Capitol Lands, elev 3514 ft, anhydrite 1963 ft, salt 2040 ft, brown lime 3360 ft, San Andres 3660 ft, abnd in Clear Fork, td 6500 ft. Tide Water Associated's Commerce Trust 1, nec lab 19, leag 31, Baylor CSL, elevation 3513 ft, anhydrite 2260 ft, brown lime 3840 ft, San Andres 4210 ft, abnd 5201 ft.

Hockley County: Slaughter — Magnolia's Mallet 15-G, swc lab 9, leag 50, Scurry CSL, flow 1491 bbls cas, acidized 10,000 gals, td 5020 ft. Rowan Drlg. Co.'s Mallet 4, near c lab 2, leag 52, Scurry CSL, flow 1043 bbls cas, acidized 14,000 gals, 4927-5009 ft. Skelly's Shults 1, swc e-90 acres lab 14, leag 41, Maverick CSL, flow 395 bbls 3-in, acidized 7500 gals, 4880-4940 ft. Texas Co.'s Mallet 21-E, nec lab 24, leag 49, Scurry CSL, flow 1662 bbls cas, acidized 12,000 gals 4980-5028 ft; Slaughter 77, sec lab 63, leag 39 Maverick CSL, flow 1214 bbls cas, acidized 13,000 gals 4955-5015 ft; Slaughter 83, sec lab 86, leag 38, Zavalla CSL, flow 2742 bbls cas, acidized 14,000 gals 4980-5043 ft; Slaughter 84, nec lab 77, leag 38, Zavalla CSL, flow 2330 bbls cas, acidized 12,000 gals, 4930-5020 ft. T. P. Coal & Oil Co.'s Graham 4, sec lab 38, leag 40, Maverick CSL, flowed 715 bbls 3-in, acidized 10,000 gals 4910-71 ft. Tide Water Associated's Slaughter 3, nec lab 10, leag 42, Maverick CSL, flow 443 bbls cas, acidized 9000 gals, 4865-4959 ft.

Howard County—Sinclair Prairie's Dodge 77, nw se nw T&P 11, blk 30, T-1-S, flow 189 bbls cas, shot 620 qts 2623-2780 ft.

Mitchell County: Northwest—F. W. Merrick's Mills 4, 1180 ft from w and 330 ft from s lines blk 18, C. H. McGinnis sur, pumped 177 bbls, shot 680 qts 1535-1689 ft.

Pecos County: Abell Ordovician — Magnolia's Francisco 2, 467 ft from e line H&TC 4½, blk 3, flow 843 bbls 45.7-gr oil natural ½-in, perf 15 shots 5084-84½ ft, td 5088 ft.

Pecos County: Abell Permian—Magnolia's Erickson-State 1, near c lot 3, H&GN 36, blk 9, pump 79¾ bbls, acidized 2000 gals perf 3850-80 ft, td 3960 ft. Stanolind's Rathjen-Simmons 1, c lot 13, H&GN 26, blk 9, flow 330 bbls natural ½-in, perf 3900-18 ft, td. Stanolind-Superior Oil Co.'s Thrapp-Walker 1, c lot 3, H&GN 23, blk 9, pump 23 bbls oil 25 bbls water initial, acidized perf 3100-3225 ft, td 5899 ft, pb to 3450 ft.

Pecos County: Apco—Anderson-Prichard's Masterson 3, c w¼ n½ H&GN 104, blk 10, flow 486 bbls 23/64-in, acidized 8500 gals, Ellenberger, perf 4585-4650 ft, td 4690 ft. Olson Drlg. Co. et al's Crockett 1-A, 2102 ft from s and 522 ft from w lines TCRy 5, blk 110, flow 256 bbls natural ¾-in, Ellenberger 4779-80 ft.

Pecos County: Shearer—W. H. Street et al's Shearer-Texaco 16, 1470 ft from sw and 1800 ft from se lines H&GN 103, blk 10, flow 146 bbls 2-in, shot 50 qts, 1429-79 ft.

Pecos County: Tobarg—Stanolind's Smith 17-B, nw se se TCRy 104, pump 18 bbls oil 30 bbls water, shot 40 qts 352-85 ft, td 400 ft. Tide Water's Smith 3-T, nw ne ne TCRy 103, pump 30 bbls oil 9 bbls water, shot 50 qts 390-440 ft, td 506 ft.

Pecos County: Walker—Cardinal Oil Co.'s White-Baker 5-J, 330 ft from n and 1189 ft from e lines GC&SF 87, blk 194, flow 100 bbls 1-in, shot 90 qts, 2150-75 ft. J. D. Lancaster et al's University-Shell 3-A, ne se ne sec 26, blk 16, flow 106 bbls ¾-in, shot 50 qts 1700-29 ft.

Ward County—Mid-States Oil Corp.'s Sloan-Llano 12, 1650 from sw and 2040 from se lines H&TC 16, blk 5, pump 102 bbls, shot 120 qts 2443-2585 ft.

Winkler County: Emperor—C. V. Lyman et al's Johnson-Cowden 1-A, nec PSL 27, blk B-5, 23,460,000 gas natural cas, 2355-2645 ft.

Winkler County: Hendrick — Stanolind-Westbrook & Thompson's Hendrick 4-T-88, c nw se PSL 28, blk B-5, abnd 3200 ft.

Winkler County: Keystone — Richardson Oil's Keystone-Sun 1-B, swc se PSL 5, blk 77, flow 290 bbls 1-in, shot 270 qts 3403-87 ft, td 3495 ft. Standard of Texas' Baird 56, sw se se PSL 13, blk B-3, flow 515 bbls cas, shot 425 qts 3160-3327 ft. Texas Co.'s Campbell 9, sec sw PSL 23, blk B-3, flow 228 bbls cas, shot 360 qts, 3129-3314 ft.

Yoakum County: Waples-Platter—Shell's Lackey 1, nwc sec 501, blk D, flowed 496 bbls plus 8 percent water, acidized 10,000 gals, 5235-5323 ft.

OLD WELLS DEEPENED

Upton County: McCamey—T. P. Coal & Oil Co.'s Lane 44-A, otd 2152 ft, pump 72 bbls, acidized 2000 gals, td 2230 ft.

Ward County—T. P. Coal & Oil Co.'s James 7, otd 2610 ft, pump 163 bbls, td 2730 ft, pb to 2702 ft.

WILDCAT STARTS

Irion County—Staley Oil Co.'s Sugg 1, c nw nw H&TC 18, blk 1, 4 mi nw Mertzon, lcn 3500-ft test.

King County — Mid-Continent Pet. Corp.'s S. B. Burnett 1, se ne se H&TC 16, blk F, lcn 7000-ft test.

Lubbock County—Stanolind's Stennett 1, c sw sw sec 18, leag 4, San Augustine CSL, lcn Clear Fork test.

Sterling County—Steve Currie & E. M. Wahlenmaier's Harris-Sun 1, c nw nw H&TC 129, blk 6, 12 mi se Sterling City, mim for 7000-ft test. Gulf's W. L. Foster 1-C, c nw nw S.P.Ry 28, blk 12, 2 mi s Sterling City, lcn 8000-ft test.

Terry County—Geo. P. Livermore, Inc.'s J. E. Mabee 1, near c ne ne sec 20, blk D-11, J. H. Gibson sur, lcn.

West Central Texas

COMPLETIONS

Callahan County—Bennett & Little's Ledbetter 2, M. Cherry sur 4, pumped 110 bbls sand 1721-27 ft. Valley Osage Oil Co.'s Slaughter 4, ne nw sec 66, B. O. A. sur, pumped 8 bbls sand 381-83 ft.

Coleman County—Lewis Prod. Co.'s Greer 2, 330 ft from n and 1200 ft from w lines blk 2, H. Kegans sur 520, new upper Strawn pay Jim Ned pool, flowed 140 bbls 44-gr oil, 4,920,000 ft gas ¾-in natural, Morris sand 3476-3500 ft, elev 2029 ft.

Jones County—Butler-Horne Drlg. Co. et al's Lenderman 6, T&P 5, blk 15, shot 60 qts nitro, junked 1960 ft; Wimberly 2, G. Martinez sur 137, flowed 420 bbls natural ¾-in, sand 2222-34 ft. Clark-Cowden Drlg. Corp.'s Wimberly 2, ne se blk 106, DeWitt CSL, flowed 384 bbls natural ¾-in, sand 2205-20 ft. J. C. Hunter et al's Minter 3, n½ lot 9, Robt. Smith sur 192, abnd 2380 ft.

Shackelford County — Roeser-Pendleton-Continental's Cook 9-A-117, ETRy 117, pumped 173 bbls, sand 1691-1705 ft.

WILDCAT STARTS

Coleman County—Angelo Lucido et al's Bertrand 1, 660 ft out sec of J. W. Robinson sur 4, lcn.

Jones County—Butler-Horne Drlg. Co. et al's W. A. Minter 1, SPRy 39, blk 2, lcn 3500-ft test. Lewis Production Co.'s W. A. Minter 1, 2100 ft from n and 660 ft from e lines blk 15, Robert Smith sur 192, lcn. Percy Jones et al's N. D. Newton 1, 1980 ft from e and 3300 ft from n lines 1356-ac tr, Jas. Halfpenny sur 139, mim.

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Texas Panhandle

COMPLETIONS

Carson County — Cities Service's Burnett 44-A, I&GN 43, blk 5, 26,700,000 gas, 350 lbs, td 2539 ft. Continental's Burnett 2, I&GN 117, blk 4, pumped 456 bbls, shot 3237-44 ft. Skelly Oil Co.'s Schafer 144, I&GN 197, blk 3, pump 68 bbls, shot 360 qts, 3043-3110 ft.

Gray County—Cree & Hoover's Jackson 2, H&GN 94, blk B-2, 4,500,000 gas, 333 lbs, shot, td 3154 ft. Danciger's McLaughlin 5, H&GN 33, blk B-2, pump 46 bbls, shot 30 qts 2996-3031 ft, td 3255 ft; Powell-Beck 24, H&GN 28, blk B-2, pump 53 bbls, shot 2857-2951 ft; Powell-Beck 26, H&GN 28, blk B-2, flow 721 bbls, granite wash 2818-55 ft, td 2928 ft. Dorsyann Oil Co.'s Bruce Bull 3, H&GN 3, blk B-2, pump 70 bbls, shot, td 3015 ft. Gulf's Block 14, I&GN 111, blk 4, pump 178 bbls 43.7-gr, shot 540 qts 3030-3165 ft. Skelly's Taylor 8, H&GN 24, blk B-2, pump 43 bbls, shot 360 qts 2835-2905 ft; Taylor 9, H&GN 24, blk B-2, pump 70 bbls, shot 510 qts 2835-2932 ft. Texas Co.'s Benedict 1, sec ne H&GN 55, blk B-2, extension, pump 250 bbls, shot 450 qts 2959-3042 ft; Chapman 12-A, ne nw se H&GN 50, blk A-9, pumped 123 bbls, shot 360 qts 2696-2770 ft; Taylor 6-F, H&GN 37, blk B-2, pumped 330 bbls, shot 400 qts 2790-2872 ft.

Hutchinson County—J. E. Crosbie's Cockrell 8, D&SE 14, blk B-3, pump 195 bbls, shot 480 qts, 2765-2865 ft. Danube Oil Corp.'s Sanford 12-A, H&TC 78, blk 46, pump 189 bbls, shot, td 2824 ft. E. J. Dunigan et al's Luginbyhle 3, TWNG 4, blk J, pump 228 bbls, shot 190 qts 3101-76 ft. Bob Murphy et al's United Prod. Co. 2, blk V. W. S. Christian sur, pump 238 bbls, shot 300 qts 3085-3171 ft. Phillips' Whittenburg 63, H&TC 58, blk 46, pump 255 bbls, shot 390 qts 2718-2835 ft. Sinclair Prairie's Johnson 71-F, A&B 31, blk Y, 8,000,000 gas, 312 lbs pressure, shot and acidized, td 3144 ft. Texas Co.'s Moore 14, se nw se TC 21, blk M-21, pump 132 bbls, shot 130 qts 3090-3140 ft and 160 qts 3084-3140 ft.

Moore County — Phillips Pet. Co.'s Faye (Wynn) 1, c se H&TC 352, blk 44, 260 gas, 330 lbs pressure, acidized, td 3152 ft. Texoma Natural Gas Co.'s Coons 20-M, H&TC 152, blk 44, 15½ mil gas, 397 lbs pressure, td 3261 ft; Coons 22-M, H&TC 186, blk 44, 11.4 mil gas, 295 lbs pressure, td 3272 ft.

East Texas

Two Woodbine Failures; Mexia-Talco Leasing Active

District lists pair Woodbine wildcat failures. Lease buying along Mexia-Talco fault trend remains active. Chapel Hill has two new wells in Pettit oil zone.

Wildcat Failures: In Anderson County, Navarro Oil Co.'s Davey-Royal 1, 4 miles northwest of Jarvis, tested water in Woodbine and carried to Georgetown 5446-67 ft for geological information. O. F. Wencker et al's Continental 1, Van Zandt County, entered sub-Clarksville 3510 ft, and Woodbine section 3940-4217 ft carried water.

Rusk County: O. W. Killam et al's Bass 1, recent Nacatoch sand discovery, pumped 155 bbls oil and 150 bbls water on 48-hour test, perforations 2910-65 ft.

Houston County: Ed Gillespie et al's Lundy 1, recent Wilcox strike near Lovelady, squeezed off original perforations, then pumped 6 bbls fluid hourly, averaging 70 percent oil, from perforations 3215-20 ft.

Chapel Hill: Shell's Ford 1, inside location for northeast sector responded to acid treatment through Pettit perforations 8108-8276 ft, for initial 513 bbls 42-gr oil, ¼-in tubing choke. Texas Co.'s Phillips 1, southwest corner W. W. Hanks survey and north outpost, flowed 562 bbls initial ¼-in, acidized Pettitt perforations 8100-30 ft and also tested wet gas in Paluxy 5790-5830 ft.

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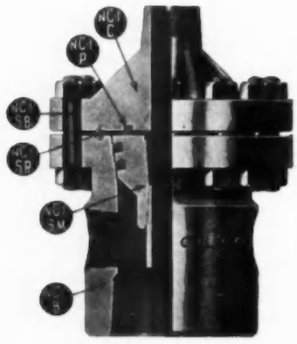

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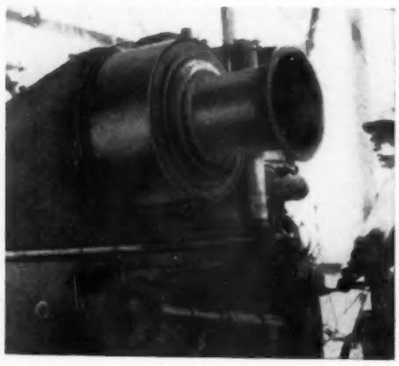

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Patented

Delta Drilling Co.'s Walton-Shell 1, second Paluxy gas distillate completion for field, stepped up its distillate output to between 12,000 and 13,000 bbls monthly through having provided market for the gas through direct line to East Texas field.

Sub-Trinity Prospecting: General revival of wildcatting along the Mexia-Talco fault trend with Smackover lime as the new objective is to follow the aggressive lease play that has been under way since the discovery of the Midway pool in Southwestern Arkansas. Buying is north of the Talco portion of the fault and west of the Mexia sector and has been extended southwest to the Luling district. An early test for Hunt County, which has been the most popular area with majors, is expected to result from geophysical option taken on a large block centering around the Kellogg community by American-Liberty Oil Co. One or more Smackover lime tests are scheduled to be drilled in northwestern Limestone County on an aggregate of 70,000 acres assembled early last summer by Floyd Scott et al for a large company.

Pressure Drop: Average bottom-hole pressure of the East Texas field on January 1 dropped to 1025.58 pounds, a decline of 3.88 pounds for the monthly period and 26.15 pounds below the January 1, 1941, reading, according to commission's survey. Return of salt water to the Woodbine sand through injection wells within and on the west and north edges stepped up to 2,449,147 barrels during December, an average of 79,000 barrels daily; 47 input wells are serving 1352 water wells.

COMPLETIONS

Joiner Area—C. H. Lyons et al's Moores 5-a, M. V. Pena sur, pump 48 bbls, Woodbine 3569-95 ft.

Longview Area—Roosth & Genecov's Smith 5, J. Price sur, pump 62 bbls, Woodbine 3819-40 ft.

Franklin County: Talco—B. G. Byars et al's Barker-Magnolia 1, sec 77½-ac tr, I. Pennington sur, flow 77 bbls, Paluxy 4193-4277 ft, td 4279 ft.

McLennan County: Wildcat — McLennan County's U. S. Government 1, J. Walker sur, 4 mi n Waco, Austin chalk 147-406 ft, Buda 717 ft, Trinity 2180 ft, abnd (fresh water well) 2404 ft.

Navarro County: Flag Lake — Topaz Oil Co.'s Trammell 6, 200 ft from river, A. C. Kyser sur 1, 1,200,000 gas, Woodbine 2976-80 ft.

Robertson County: Wildcat—W. H. Doran et al's Anderson 1, 660 ft n of Pinkerton's Anderson 1 (failure), J. Webb sur (Lester Purdy League), abnd 1439 ft.

Wood County: Hawkins—Stanolind's Christian Board 1, nwc 103½-ac lse, S. Castleberry sur, flow 276 bbls ¼-in, Woodbine perf 4761-71 ft, td 4885 ft; Miller 5, 110-ac, J. P. Moseley sur, flow 408 bbls ¼-in, perf 4770-80 ft, td 4871 ft. Texas Co.'s Cobb Bros. 6, 160-ac lse, J. G. Heard sur, flow 344 bbls ¼-in, perf 4720-64 ft, td 4826 ft.

Texas Permits Low

The Texas Railroad Commission last week approved permits for drilling 13 wells in Texas, 91 less than were authorized the week before. The sharp decline obviously has been brought about by the difficulty encountered in obtaining final approval as to whether the steel will be available in each individual case.

No permits were reported from the East Texas field, and none were allowed in the Panhandle or in West Central Texas.

Four locations were approved in Southwest Texas, one in the Gulf Coast, two in East Central Texas, three each in West Texas and North Texas.

Southwest Texas

Carrizo-Wilcox Continues To Hold Principal Interest

Carrizo-Wilcox exploration continues major interest. Nine new fields in this zone have been opened and two wildcats are in the testing stage. Lavaca County appears to be the most likely sector, three fields on production and a wildcat preparing to test.

Bastrop County: H. A. Pagenkopf's Bell 1, Black survey, 14 mi nw Bastrop, and on old Gulf prospect, top Edwards lime 3130 ft, good saturation to 3150 ft.

Bee County: Tom Slick's Grissom 1, discovery South Caesar field, flowed 12 barrels hour 48.3-gravity oil, ¼-in choke, 2000 lbs tp, 2200 lbs cp, gas-oil ratio 25,000/1, perf 6552-57 ft in Carrizo-Wilcox zone. Squeezed in effort to cut gas-oil ratio.

Colorado County: Shell Oil Co.'s Plow Realty Company 4, north outpost Sheridan field, pb from 11,500 ft and testing Wilcox sands.

Dimmitt County: Wellington Oil Co.'s Sullivan 2-B, 2½ mi s Pendencia Creek field, cored gas sand 1887-1905 ft, drilling ahead.

Jim Wells County: Southern Minerals Corp.'s Stillwell 2, Alice field, deepened from 6424 to 7767 ft, attempted to blow out, stuck drill stem, emergency completion through drill stem, flowed 120 barrels 49.5 gr oil 5/32-in ch, 4750 lbs wp, 5600 lbs sip. Top Eponides Yegua about 7600 ft; first Yegua production on Vicksburg trend.

Lavaca County: Shell Oil Co.'s Neuhaus 1, 3 mi s Vienna, perf above 10,169 ft, shut in for storage. New field named Provident City. Shell's McManus 1, discovery Brushy Creek, on potential test flowed 130 bbls 55-gr dist ¼-in ch, 2585 lbs tp, cas sealed, perf between 7725-58 ft in Wilcox, td 10,998. Gas-oil ratio high at 25,600/1.

Names: South Texas Geological Society's Nomenclature Committee has decided Shell Oil Co.'s McManus 1 is to be Brushy Creek, and that company's Neuhaus 1 is Provident City, both in Lavaca County. Tom Slick's Grissom 1, Bee County, has been named South Caesar. Wellington Oil Co.'s Sullivan 1-B, Dimmitt County, is to be Pendencia Creek. O. W. Killam's strike southeast of Mirando City on the Marrs McLean land, Webb County, will be known as McLean. South Sinton is the name for Tidewater-Associated Oil Co.'s San Antonio Loan and Trust Company 1, Frio sand distillate producer in San Patricio County. W. Stewart Boyle et al's Rodesney 1, Jackson County, has been named Looney's Branch.

COMPLETIONS

Atascosa County: Wildcat—Jack Giblin's Richter 1, E. H. Timmony sur 135, 3 mi ne Pleasanton, abnd 1060 ft.

Bexar County: Gas Ridge—Gas Ridge Inc.'s Hamilton & Swain 44, Rodriguez sur, pumped 1.7 bbls 35-gr oil, top pay 410 ft, td 485 ft.

Duval County: Casa Blanca—M. L. Massingill's DCRC 4, sec 294, pumped 54 bbls 21-gr oil, top sand 1053 ft, td 1085 ft.

Duval County: E. Cole—Leach & Johnson's R. V. de Benavides 3, M. Arispe gr, pumped 22 bbls 21-gr oil, top sand 1738 ft, td 1742 ft.

Duval County: Government Wells—Sun's Wiederkehr 77-A, sec 55, pumped 123 bbls 20.8-gr oil, Hockleyensis 1818-25 ft, 5½-in csg at 1818 ft, pb 1847 ft, td 2964 ft, new sand.

Duval County: Hoffman—Magnolia's Well 24, sec 495, pumped 39.55 bbls 21.3-gr oil,

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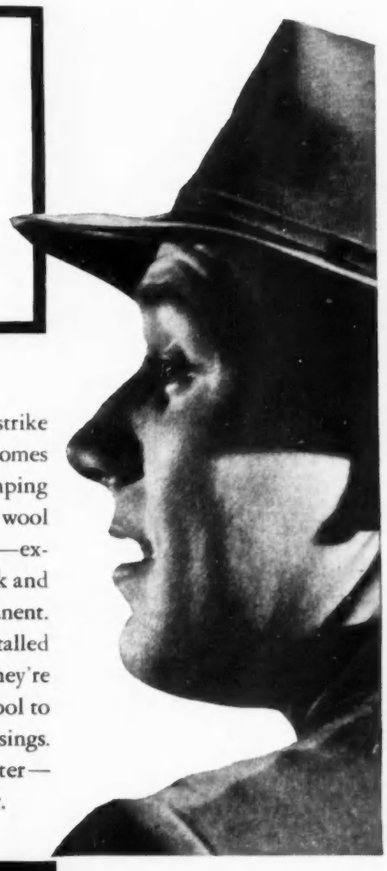

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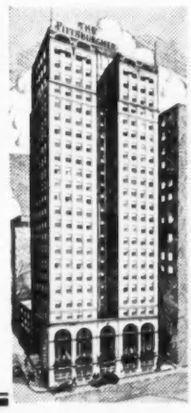

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Duval County: Kreis—W. C. McBride, Inc.'s Escapule 1, sec 78, abnd 3231 ft, top Mirando 3210 ft.

Duval County: Sejita—Trinity Gas Corp.'s Perez 1, Charco Redondo Gr, est 28,000 gas, spray dist open, 2200 lbs rp, perf 5468-87 ft, top sand 5395 ft, td 5633 ft; extends field 1 mi s.

Duval County: Seven Sisters—S. C. Creech et al's Chernoskey 1, sec 226, pumped 33.74 bbls 21.2 gr oil, gas/oil ratio 128/1, top sand 3245 ft, td 2250 ft; P. T. Wright 1, sec 226, abnd 3036 ft, top Pettus 3023 ft.

Duval County: Wildcat—Henderson Coquat's R. Lopez 1, sec 455, 7 mi ne Bruni, pumped 30.25 bbls 21-gr oil, little gas, Cole sand 1693-1705 ft, 5½-in 1705 ft, perf 1697-1703 ft; either new fld or extension to East Cole area. Gregg Sawyer's Dinn 1, sec 143, 2 mi sw Kohler fld, abnd 2954 ft.

Hidalgo County: LaReforma—Magnolia's Magnolia-Guerra 4, Sh 25-B, 5262 ft ne prodn, abnd 6400 ft.

Jackson County: Ganado—Texas Co.'s M. Hultquist 4, D. Dempsey sur 363, flowed 168.33 bbls 43.6-gr oil, ¼-in ch, 1175 lbs tp, cas sealed, gas/oil ratio 805/1, perf 6631-34 ft, top pay 6625 ft, 5½-in cas 6707 ft, td 7004 ft; new sand; L. A. Silliman 2, M&C sur, flowed 153.31 bbls 37-gr oil ¼-in ch, 975 lbs tp, cas sealed, perf 6422-25 ft, top sand 6423 ft, td 6698 ft.

Jackson County: Lolita—Magnolia's Mary Mitchell 23, S. F. Austin League, flowed 133.5 bbls oil 7/64-in ch, 550 lbs tp, 850 lbs cp, perf 5933-36 ft, top pay 5933 ft, td 5940 ft.

Jackson County: Maurbro—Humble's S. G. Drushel 4, B. J. White League, flowed 124.2 bbls 24-gr oil ⅛-in ch, 600 lbs tp, 575 lbs cp, gas/oil ratio 195/1, perf 5214-21 ft, top sand 5214 ft, td 5235 ft; Mauritz Bros.' 7-B, B. J. White League, flowed 102.6 bbls 25.5-gr oil ⅛-in ch, 225 lbs tp, 475 cp, gas/oil ratio 182/1, top sand 5219 ft, td 5234 ft.

Jackson County: N. LaWard—Moore & Ahern's A. L. Burditt 3, blk 10, flowed 419.04 bbls 26-gr oil 12/64-in ch, gas/oil ratio 270/1, 625 lbs tp, 650 lbs cp, perf 5211-19 ft, top pay 5211 ft, td 5226 ft.

Jackson County: West Ranch—Magnolia's West 190-B, Musquez gr, flowed 154.32 bbls 31.3-gr oil 7/64-in ch, 850 lbs tp, 1000 lbs cp, gas/oil ratio 410/1, perf 5718-22 ft, top pay 5718 ft, td 5735 ft; West 229-A, Musquez gr, flowed 149.04 bbls 30.5-gr oil ⅛-in ch, 750 lbs tp, 850 lbs cp, gas/oil ratio 386/1, perf 5542-52 ft, top sand 5542 ft, td 5553 ft.

Jackson County: Wildcat—W. S. Boyle & J. G. Mayo's A. C. Rodesney 1, J. Rambo sur, midway between Ganado & Mauritz, flowed 115.38 bbls 28.9-gr oil ¼-in ch, 540 lbs tp, 1120 lbs cp, gas/oil ratio 300/1, perf 5408-14 ft, Frio sand 5407-19 ft, td 7808 ft; new fld.

Jim Hogg County: Colorado—Humble's King-Colorado 52-B, Las Moretas gr, flowed 149.04 bbls 46.4-gr oil 3/16-in ch, gas/oil ratio 225/1, top sand 2864 ft, td 2873 ft. Sun's T. T. East 1-B, Las Moretas gr, 2/3 mi ne outpost, flowed 94 bbls 47-gr oil 9/64-in ch, 270 lbs tp, 700 lbs cp, gas/oil ratio 467/1, sand 2902-11 ft, td 2911 ft.

Jim Wells County: Orange Grove—Atlantic's L. Schuenemann 3, blk 14, flowed 90.38 bbls oil ¼-in ch, 750 lbs tp, 810 lbs cp, gas/oil ratio 1845/1, perf 5083-85 ft, top sand 5077 ft, td 5090 ft.

Jim Wells County: Seeligson—Magnolia's Seeligson 25, A. Ramirez gr, flowed 166 bbls oil 7/64-in ch, 850 lbs tp, 1100 lbs cp, perf 5992-94 ft, td 7017 ft.

Jim Wells County: West Alfred—H. F. Wilcox's O. S. Adams 1, sur 6, abnd 5306 ft, dry in 4200 & 4300-ft sands.

Jim Wells County: Wildcat—H. J. Mosser's Fee 1, J. Reynolds sur, 3½ mi nw Alfred, abnd 5396 ft, heaving shale in Jackson.

Kleberg County: Stratton—Humble's King-Paso Ancho 8, Paso Ancho gr, flowed 121.66 bbls 44.3 gr oil ⅛-in ch, 900 lbs tp, 1200 lbs cp, gas/oil ratio 727/1, trace wtr, perf 6455-88 ft, top sand 6448 ft, td 6661 ft.

Live Oak County: S. White Creek—Simmons Oil Co.'s J. A. Everett 2, tr 3409, blk 72, flowed 176 bbls 20-gr oil ¼-in ch, 75 lbs tp, 500 lbs cp, no gas, perf 1848-53 ft, top sand 1845 ft, td 1856 ft.

McMullen County: Wildcat—Cities Service Oil Co.'s Lowe 4, Martin sur, sec 130, 29 mi sw Tilden, abnd 1913 ft in Pettus.

Nueces County: Agua Dulce—Hewit & Dougherty's Arledge & Power 2, sec 195, est 45,000 gas, spray dist, sip 2650 lbs, perf 6942-58 ft, td 7067 ft. Lockhart Oil Co.'s C. F. Winfield 2, Agua Dulce gr, flowed 135 bbls 41.3-gr oil ⅛-in ch, 800 lbs tp, 1150 lbs cp, gas/oil ratio 1850/1, top sand 6856 ft, td 6970 ft. Richardson Pet. Co.'s Knight & Jackson 5, sec 184, flowed 63 bbls 41.5-gr oil 5/64-in ch, 2050 lbs tp, 2450 lbs cp, perf 7046-51 ft, td 7060 ft; Z. McCoy 8, flowed 96.8 bbls 41.5 gr oil 11/64-in ch, 320 lbs tp, 1400 lbs cp, gas/oil ratio 1845/1, perf 6900-05 ft, td 5978 ft.

Nueces County: Minnie Bock—E. A. Graham's Reidel 4, Pauls sub, flowed 43 bbls 24-gr oil ⅛-in ch, 240 lbs tp, 480 lbs cp, gas/oil ratio 440/1, perf 3790-93 ft, top sand 3785 ft, td 3815 ft.

Nueces County: Stratton—Mid-Continent's Martindale 1, sec 200, flowed 113.16 bbls 42.2-gr oil ⅛-in ch, 820 lbs tp, 1175 lbs cp, gas/oil ratio 955/1, perf 6668-75 ft, top sand 6665 ft, td 6684 ft.

Refugio County: Fagan—Seatex Oil Co.'s F. Fagan 2, Riley sur, flowed 51.14 bbls 36.8-gr oil, 6/64-in ch, 1350 lbs tp, 1750 lbs cp, gas/oil ratio 280/1, 12% sw, perf 5359-74 ft, top sand 5359 ft, td 5792 ft.

San Patricio County: Plymouth—Texon Royalty Co.'s Rambo 7, sec 35, flowed 193.5 bbls 29.8-gr oil, ¼-in ch, 300 lbs tp, 800 lbs cp, gas/oil ratio 420/1, perf 5496-5500 ft, td 6171 ft.

Starr County: Sun—Humble's E. Block 2, Los Retachez gr, abnd 4743 ft.

Victoria County: Placedo—Barnsdall's J. Pickering 13, Lot 2, flowed 76 bbls 32.9-gr oil 10/64-in ch, 315 lbs tp, cas sealed, td 6087 ft.

Victoria County: Victoria—J. B. Coffee's A. Simon 1, lot 1, blk 3, pumped 48 bbls 20.5-gr oil, perf 2674-76 ft, top sand 2669 ft, td 3076 ft.

Wilson County: Floresville—H. J. Baker's J. Myers 5, H. J. Arocha gr, abnd 644 ft, top sand 632 ft.

Zapata County: Wildcat—Forest Dev. Corp.'s S. J. de Ramirez 2, blk 8, Taegel sub, sh 5, sur 7, 7 mi s Randado, abnd 2502 ft.

WILDCAT STARTS

Bexar County—Nick Marosis et al's McMonagel 1, McGreal sur, 14 mi sw San Antonio, mi 1200-ft test.

Duval County—Wellington Oil Co.'s Glasscock 2, La Huerta gr, 3 mi ne Concepcion, lcn, 6500-ft test.

Jackson County—W. Stewart Boyle & John G. Mayo's Reserve Realty & Inv. Co.'s 1, J. Heard sur, 3 mi nw Maurbro fld, lcn 6500-ft test. J. L. Collins & Co.'s Simons 1, W. J. E. Heard sur, 2 mi e Edna, lcn 6500-ft test.

McMullen County—Magnolia's Atkinson 1, AB&M 125, 16 mi ne Freer, lcn 2200-ft test. Quintana's South Tex Syndicate 1-C, BS&F 25, 9 mi e Washburn fld, dk, wor 10,000-ft test.

Milam County—Fritz Fuchs' Galbreath 1, 91.25-ac tr, 3 mi ne Thorndale, lcn 1800-ft test.

Nueces County—Crown Central Pet. Co. et al's Womack 1, sec 9, Cuadrilla Irr. Co. sur, 3½ mi nw N. Luby, lcn 7500-ft test.

Starr County—Coastal Refineries' Guerra 1, Share 34, Porc 107, 17 mi n Rio Grande City, lcn 3700-ft test. Sun's Starr County Cattle Co. 1, sur 46, 10 mi se Cuevitas fld, dr 2100 ft 4500-ft test.

Webb County—W. C. McBride's Walker 2, sur 1012, 7 mi n Oilton, lcn 3100-ft test.

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Texas Gulf Coast

New Fields Opened at Needville, Ramers Island

Tyler County gets third oil field in recent months with wildcat testing in Cockfield; production opened at Needville, Fort Bend County.

Tyler County: American Republics Corp. is testing Cushing Fee 1-1140, wildcat on the Ramers Island prospect, to open the third oil field in the county in as many months. Casing has been set to test around 5395-5401 ft. Drill-stem test at this level recovered 14 stands oil, previous test at 5383-95 ft recovered only gas. Originally projected to Wilcox, but with showings encountered in the Cockfield completion will be made at that level. Fred and Camp Eleven fields recently were opened in the same area, both producing from Wilcox. The new discovery is 2 miles east of Camp Eleven. A hearing is scheduled at Austin February 3 on spacing and rules for the new field.

As a result of the three strikes, which, in addition to Joe's Lake and Spurger, gives the county four oil fields and one gas reserve, considerable geophysical work is being conducted in the area. Old prospects that heretofore were abandoned after one shallow test are being "re-geologized" with Wilcox tests in mind.

Fort Bend County: Needville at last has been opened to oil production. Long a money sink-hole for wildcatters, including Tide Water Associated Oil Co., Glenn McCarthy, Walter Goldston et al, the later operator has completed Letitia Smith 1 for 235 barrels of 25-gravity oil per day through ¼-in choke in Frio. Perforations were made at 5190-94 ft in sand at 5184-94 ft, gas-oil ratio 150-1, no water. Goldston recently drilled Coyle 1, which flowed small amount of distillate, but mostly gas.

Wilcox Trend: Shell Oil Co. is still testing Central Coal & Coke 1, Mercy area, San Jacinto County. Reports credit the well with opening a new Wilcox field. Bottomed at 8321 ft, and with pipe cemented at that depth, information has been withheld. Shell is coring and drilling below 9300 ft in John E. Hintz 1, 2 miles west of Sealy in Austin. This well also is credited with favorable shows. Projected depth is 10,000 ft.

Superior Oil Co. is dually completing McWhorter 1-C and extending production southwesterly in Lake Creek field, Montgomery County. The well flowed 408 barrels oil in 23 hours through ¼-in choke, tubing pressure 1900 pounds. Second test was made at 9775-808 ft for dual production. Both sands are in Wilcox. Superior's South Texas Development 1 on east side of field failed in perforations at 8955-65 ft and at 9120-30 ft, both zones flowing salt water. New perforations will be made lower.

COMPLETIONS

Brazoria County: Wildcat—West Production Co.'s Cowell 1, south of Mykawa, HTB 237, abnd 6431 ft.

Brazoria County: West Columbia—John F. Merrick's S. W. Pipkin 1, 80 ft fr n l & 50 ft fr e l lot 11 on 35-ac lse, George Tennille sur, abnd 1900 ft.

Chambers County: Anahuac — Humble's Johnson 40, 660 ft w of e l & 2181 ft s of n l of lse, HTC 49, sand 7089 ft, flowed 709 bbls ¼-in chk, tp 1000, cp 1200, gor 484/1, gr 37, td 7140 ft.

Hardin County: Sour Lake—J. G. Beard's Lone Acre Oil Co. 1, 1792 ft fr s l & midway between e & w lines 2½-ac tr, S. Jackson sur, swabbed water & oil, abnd 1895 ft.

Harris County: Humble—Reclamation Production Co.'s Hirsch 9, 200 ft fr n l & 25 ft fr w'rly e l lot 10, Jules Hirsch subdiv, James Strange sur, abnd 1791 ft. Leigh J. Sessions' Louisiana Fondren 4, 1229 ft fr e l & 81 ft fr s l blk 5, J. B. Jones sur, pumped 38 bbls, td 1060 ft.

Jefferson County: Lovell Lake—Humble's Beaumont Launch Club 3, 600 ft se No. 1, C. Hillebrandt sur, sand 7720 ft, flowed 149 bbls ⅛-in chk, tp 1550, td 7761 ft.

Jefferson County: West Beaumont—Stanolind's Treadway Land 4, 1031 ft n & 467 ft w se cor lot 3, blk 1, L. Langham subdiv, H. Williams lge, perf 5374-84 ft, flowed 69 bbls ¼-in chk, tp 80, cp 600, gr 26.8, td 5389 ft.

Liberty County: Hull—Gulf's Scarborough 21, IGN 28, start at ne cor of sur, go 2153 ft s along e l thence at ra 825 ft w, perf 5966-6006 ft, flowed 333 bbls 3/16-in chk, tp 900, gr 34, gor 450/1, td 6015 ft.

Tyler County: Wildcat—Houston and American Republics' Fee 1, opens fld sw Joe's Lake, 1400 ft s & e of nw cor Theophilus Cushing sur, elev 65.2 ft, perf 8000-10 ft in Wilcox, flow 612 bbls ¼-in chk, tp 1350, cp 1750, sand 8000-15 ft, td 8035 ft.

Wharton County: Magnet—Humble's Cockburn 51, 950 ft se of No. 23 & 850 ft sw'ly fr No. 33, S. Castleman sur, flow 45 bbls 5/64-in chk fr td 5535 ft.

Wharton County: Withers—F. W. Michaux' Pierce Est. 1-24, 933 ft n Pierce A-3 C. Howard sur, perf 5346-58 ft, flow 177 bbls 5/32-in chk, tp 575, cp 550, td 5390. F. W. Michaux' Pierce Est. A-25, 933 ft s 62 e fr Pierce 3-A, C. Howard sur, flow 154 bbls 5/32-in chk, td 5400 ft; Pierce Est. 34-A, T. Westfall sur, perf 5340-46 ft, flow 187 bbls 5/32-in chk, tp 525, cp 575, gr 25.9, td 6392 ft.

WILDCAT STARTS

Brazos County—Phillips' Schoeps 1, Millican area, 1188 ft e of w l & 100 ft s of n l E. M. Millican sur, 1 mi s Mitchell 1 dry hole, pd 7000 ft.

Wharton County — Clark & Cowden's Kountze 1, 2 mi ne Danevang, c se nw ETRR 96, lcn.

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HOUSTON, TEXAS

Louisiana Gulf Coast

New Sands Opened at Neale, Bayou des Allemands

New oil sands opened at Bayou des Allemands, St. Charles Parish, and at Neale in Beauregard Parish; Cities Service still testing gas-distillate discovery in Jefferson Davis Parish.

New Sands: Amerada Petroleum Corp. has opened a new shallow sand at Bayou des Allemands, St. Charles Parish, with completion of Sellers 1. Pipe was perforated at 5424-34 ft, flowing 162 barrels oil per day through 9/64-in choke, tubing pressure 750 pounds, gas-oil ratio 345/1, in Miocene. Numerous other wells have encountered this sand, but failed to yield commercial production. Regular field production is below 10,000 ft.

Atlantic Refining Co. has opened a new sand in the Neale field, Beauregard Parish, with Hawkins Unit 1 flowing 90 barrels 50-gravity oil in 12 hours through 3/16-in choke, gas-oil ratio 2900/1. Perforations were made at 11,532-574 ft, about 500 ft below regular horizons, all in Wilcox. Several tests were made lower in the hole, the well being the deepest ever drilled in the field.

Jefferson Davis Parish: Cities Service continues to test Lacassine Land Co. 1, gas-distillate discovery on Thornwell prospect. Extremely high pressures interferred with good tests in this wildcat which flowed 28 barrels of 49-gravity distillate and 1,750,000 cubic feet of gas through 9/64-in choke from perforations at 10,319-321 ft in Oligocene. Operators are plugging back for next test around 9850 ft.

Acreage Option: Cities Service has taken geophysical option on approximately 90,000 acres of Natalbany Lumber Company acreage along Wilcox trend in Livingston, East Felicina, St. Helena, St. Tammany and Tangipahoa Parishes, Central Louisiana.

Wildcats: Paul G. Benedum, Houston, has projected a 9000-ft wildcat on Grande Marie prospect, Iberia Parish. Operator's LL&E 1, is 4 miles south of Little Bayou field, two miles east of Hamill & Smith's Baize 1, drilled to 7500 ft and logged some oil shows. Benedum's well is in sec 4-13s-7e.

Phillips Petroleum Co. has projected a test on a 7000-acre farmout block from Amerada Petroleum Corp. on Bayou Sorrell prospect, Iberville Parish. Amerada worked the area with reflection seismograph.

Acadia Parish: Stanolind Oil & Gas Co. has spudded its second well on Lewisburg prospect. Well is Mills 1, 3 miles east of the discovery which flowed gas and distillate. Stanolind has another operation going, Richard 1, being east of discovery well. The discovery itself is in Acadia Parish while the outpost is in St. Landry Parish.

Assumption Parish: George Echols & J. Ray McDermott have cleaned up fishing job in Armelise Planting Co. 2 on east flank Napoleonville Dome. Drill pipe was stuck around 7170 ft, total depth. This large salt plug has had two previous deep dry holes drilled on the flanks, Simoneaux 1, drilled by Falcon-Seaboard and Armelise Planting 1, drilled by Echols & McDermott. The latter test had several showings.

COMPLETIONS

Calcasieu Parish: Starks—W. T. Burton's Lutcher-Moore 4, 485 s 1507 e nwc 19-9s-12w, perf 5990-6020 ft, flow 525 bbls ¼-in chk, tp 925, gr 35, td 6376 ft.

Evangeline Parish: Ville Platte—Continental's Ludeau Trust 4, start s cor 123-ac tr, go n 40 deg 24 mins w alg sw l 2223 ft thence n 49 deg 36 mins e 387 ft, flow 160 bbls 12/64-in chk, td 10,155 ft.

Jefferson Parish: Barataria—Reese E. Carter's Pailet Realty 1 Unit 99, 805 ft fr w l & 335 ft fr n l unit 99, 2-16s-23e, perf 10,060-66 ft, & squeezed, reperf 10,055-58 ft, flowed 165 bbls 5/32-in chk, gor 700/1, gr 42.5, td 10,112 ft.

LaFourche Parish: Leeville — Texas Co.'s LLE-Leeville 35, 4566 w 1232 n sec ne 27-21s-22e, perf 8800-40 ft & squeezed, reperf 8800-40 & squeezed, reperf 8475-95 ft in new sand, flowed 178 bbls day ⅛-in chk, td 9080 ft.

St. Charles Parish: Bayou des Allemands—Amerada's Sellers 1, 2506 & 4911 e nwc 14-15s-20e, perf 5424-38 ft, flow 121 bbls ⅛-in chk, tp 750, gor 345/1, gr 32.2, opens new sand, td 10,334 ft.

St. Martin Parish: Anse la Butte—Stanolind's Martin 4-B, 8174 ft ne alg nw l sec 122 fr w cor, thence 100 ft se at ra in 122-9s-5e, perf 6142-47 ft & squeezed, perf 6090-6130 ft, squeezed and reperf same zone, flowed 205 bbls 9/64-in chk, tp 1035, cp 1000, td 6389 in salt.

Terrebonne Parish: Lapyrouse — Gulf's Eschete 1, 2020 ft e alg s l lot 4, tr B fr sw cor & 97 ft n at ra in 67-20s-18e, second well on prospect, ran electrical log, took sidewall samples,, abnd 12,001 ft.

Vermilion Parish: Gueydan—Fohs' Evans 1, north flank, 1730 n & 1930 w sec 27-11s-1w, drilled to 9237 ft, plugged back and sidetracked 6954 ft, perf 9542-52 ft, flowed 416 bbls 10/64-in chk, tp 1235, cp 1775, gor 1000/1, ga 33.1, td 9585 ft.

WILDCAT STARTS

Acadia Parish—Vincent & Welch's Ardoin 1, West Tepetate area, 738 w 335 s nec tr in 19-7s-2w, lcn.

Avoyelles Parish—Placid Oil Co.'s Thompson & Katz 1, sw nw 4-2n-5e, on 5000-ac blk, lcn.

Iberia Parish — Humble's Petit Anse 1, Avery Island area, begin sw center sec 25 alg w l sec 2724 ft, thence e at ra to w l 1510 ft in 25-13s-5e, lcn.

Iberia Parish—Paul G. Benedum's LLE 1, n 3 deg w 933 ft fr se cor sec 4, or 660 ft at ra fr se & sw l sec 4-13s-7e, Jack Frazier, contractor, lcn.

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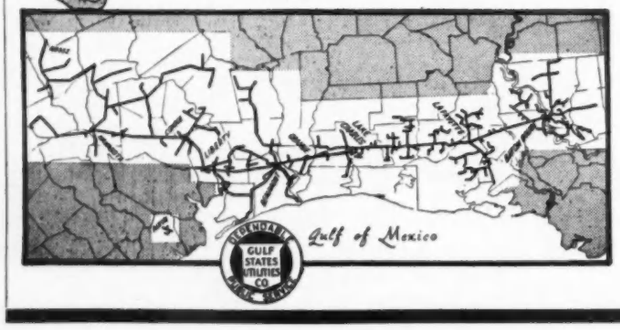

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North Louisiana

Third Deep Test at Lisbon; Eleven at Haynesville

Third Smackover lime deep test for North Lisbon, Claiborne Parish, starts as second test sets final casing; 3 locations at Haynesville brings total for Pettit lime to 11; 100-octane gasoline plant looms for Cotton Valley, Webster Parish.

North Lisbon: Union Producing Co. began rigging for third Smackover lime 11,000-ft test in North Lisbon, Claiborne Parish, last week, at Meadows B-1, Section 13-21n-5w, midway between discovery Smackover lime gas/distillate producer, its Meadows A-1, C NE 18-21n-4w, and its McDonald 1, C SW 13-21n-5w, deepest test ever drilled in North Lolisiana.

Haynesville: Three new locations staked for Pettit lime tests at Haynesville, Claiborne Parish, brings to 11 locations staked since this horizon found productive of oil recently in two wells. Space rule may soon be adopted by Conservation Commission. Wells drilled to 2800-ft Blossom in 1921 followed center of ten-acre space pattern and these wells have been re-pressured for several years.

Lisbon: Plans for a re-pressuring project was discussed last week by a Lisbon Operators Committee and Director H. W. Bell of Louisiana Conservation Commission's minerals division at Shreveport. Over 200 wells there averaging combined production of 2500 barrels from Pettit at 5200-5300 ft. Last week one company abandoned 25 wells and pulled pipe. Details of re-pressuring plan are being worked out.

Cotton Valley: It was announced in Washington last week by Louisiana Congressman Overton Brooks that negotiations were under way and appeared favorable for a $4,000,000 federally financed aviation gasoline plant for the Cotton Valley field, Webster Parish.

COMPLETIONS

Caddo Parish: Hosston—Bayou State Oil Co.'s Stiles B-2, 27-21n-16w, pump 25 bbls, td 1037 ft.

Caddo Parish: Pine Island-Vivian—Burnham Drlg. Co.'s Thigpen-Herold B-1, 34-22n-16w, abnd 2515 ft.

De Soto Parish: Logansport-Joaquin — Southern Production Co.'s O. C. Bland 1, nw se 11-11n-16w, 92,500,000 gas (open flow), 4920 ft (Glen Rose).

Tensas Parish: Wildcat—Carter Oil Co.'s Rhodes 1, nw sw 29-9n-10w, abnd 5501 ft.

WILDCAT STARTS

LaSalle Parish—Carter Oil Co.'s Tensas Delta C-1, se sw 21-6n-4e, rig; Tensas Delta H-1, se sw 15-5n-4e, rig. H. L. Hunt, Tensas Delta B-1, c se ne 35-5n-4e, rig.

Natchitoches Parish — George H. Echols, McDermott-Union Sawmill 1, ne ne 24-6n-7w, rig.

Winn Parish—H. L. Hunt, Goodpine F-72, nw se 19-10n-4w, rig.

Arkansas

Rework Dorcheat Well To Try Lower Marine

Test depleted in Smackover lime in Dorcheat field reworking to test Lower Marine; McKamie test that flowed oil in Lower Marine choked off by salt water; gas purification plant planned at Macedonia.

Dorcheat: Inspired by the oil show-

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ing in the Lower Marine (Cotton Valley) horizon in a well at McKamie, Atlantic Refining Co. last week rigged for work-over at Pinewoods B-1, C SE NW 16-18-22, which has become depleted as a gas/distillate producer in Smackover lime. Section between 6400 and 8600 ft where seven shows logged in drilling to be tested. Operation is east offset to only dry hole in Smackover lime horizon in field.

McKamie: After flowing 15 to 20 barrels of 36 gravity oil for 15 hours, Carter Oil Co.'s Cornelius 1, C NE 30-17-23, plugged back to Cotton Valley (Lower Marine) and perforated and tested at 7255-65 ft ceased to flow due to being choked off by salt water. Operator squeezing off for another test of this horizon. Carter is testing in Smackover lime at Hanes 2, C SW 31-17-23, at 9373 ft, after logging saturation from 9130-48 ft.

Macedonia: Arkansas-Louisiana Gas Co.'s has taken 90-day option on SW SW 9-18-21, north of Macedonia, as proposed site for a gas purification plant. Shell Oil Co. has a similar plant at Magnolia and McKamie Gas Cleaning which is ready to start work on a desulphurization plant at McKamie in Section 23-17-23, may erect a gasoline extraction plant in connection with the project.

Midway: Barnsdall Oil Co.'s Bond 1, NW SW 11-15-24, LaFayette County, that opened the new Midway field at 6537 feet in Smackover lime, after a series of bottom-hole pressure tests has been re-opened and is flowing 400 barrels of clean oil daily. Fourteen locations have been staked in this field, with three rigging up, but drilling has been held in abeyance pending decision by Arkansas Oil and Gas Commission, which set a tentative 40-acre space rule for the field.

COMPLETIONS

Union County: East Schuler—Atlantic's Mason 1, c se sw 13-18-17, elev 234 ft, perf 24 shots 5568-76 ft, flow 135 bbls 5852 ft; J. M. Bishop B-1, c ne se 14-18-17, elev 216 ft, abnd 5830 ft. Tide Water Associated's P. Garrett 1, c nw nw 24-18-17, porous oil sand 5667 ft, porous sw sand 5667-69 ft, porous sw sand 5740 ft, abnd 5756 ft.

WILDCAT START

Union County—S. G. Mitchell's Citizens Bank 1, c nw se 1-19-13, sp.

Mississippi

COMPLETIONS

Yazoo County: Tinsley Dome—E. C. Johnston's, Martin 4, ne nw nw 1-9n-3w, elev 312 ft, 7-in 4835 ft, Woodruff 4849-55 ft, pump 27 bbls hourly, td 4855 ft. Ray & Woolf's Hester 1, sw sw ne 36-11n-3w, abnd 5991 ft, top Selma chalk 4842 ft, Woodruff 5024 ft, Eutaw 5118 ft, Perry sand 5475-94 ft, Stevens sand 5561-85 ft, Laoomns sand 5619-98 ft, McGraw sand 5948-59 ft, Tuscaloosa 5984 ft.

Alabama

COMPLETION

Lauderdale County — Buford Fillingame's Meeke 1, 330 ft n & w sec. 20-1s-10w, abnd 376 ft.

California

Kern County Test Arranging to Abandon

Kern County test in Edison area slated for abandonment, while preparations under way for remedial work on old wildcat in Grapevine area. Outpost try scheduled for old Santa Barbara County area.

Kern County: Frazier-Finley Company failed to encounter showings of importance in Portals Corp. 1, semi-wildcat in Sec. 4-30-29, Edison area, after taking test to 3880 ft and is preparing to abandon.

Reserve Oil & Gas Co. is preparing to re-enter No. 33-1 wildcat in the Grapevine area which was drilled several years ago and attempt another completion. Company plans to use newly developed wire wrapped liner to overcome sand problem which prevented satisfactory test. Liner was developed by Shell Oil Co. in its Raisin City exploratory work.

Santa Barbara County: Republic Petroleum Co. has staked location for outpost try in Sec. 16-8-32, Gato Ridge area, location falling a half mile south of Petrol Corp.'s Tognazzini 3-A.

COMPLETIONS

Fresno County: Jacalitos Hills—Wilshire Annex Oil Co.'s No. 21-26E, 335 ft s 800 ft e nwc 26-21-15, pump 103 bbls, 31 ft, perf 3713 ft, temblor 3675 ft, top oil sand 3680 ft, td 3713 ft.

Kern County: Arvin Area—Pacific Western's Houchin 1, 465 s 330 w nec 27-31-29, pump 75 bbls, perf 7225-7280 ft, 7285-7315 ft, oil sand 7225 ft, td 7409 ft.

Kern County: Belridge-South—Ivy Drilling Co.'s Parkford 1, 150 s 620 ft e w¼ cor 12-29-21, pump 20 bbls, 110 ft, perf 1104 ft, top oil sand 925 ft, td 1140 ft.

Kern County: Devils Den—Raymond D.

Statement of Condition

DECEMBER 31, 1941

RESOURCES

Cash and Due from Banks	$25,671,388.18	
U. S. Government Securities	11,999,121.13	
Municipal Securities	3,577,107.63	
Corporate Securities	408,345.25	$41,655,962.19
Loans and Discounts		24,924,363.76
Overdrafts		362.72
Other Real Estate		1.00
Federal Reserve Bank Stock		120,000.00
Income Earned, Not Collected		112,155.37
Bank Premises and Fixtures		1,103,217.11
Total		$67,916,062.15

LIABILITIES

Deposits		$61,986,783.97
Income Collected, Not Earned		97,590.84
Taxes, Interest and Expense—Accrued		141,756.95
Capital (Common)	$2,000,000.00	
Surplus	2,000,000.00	
Undivided Profits	1,172,576.03	
Reserves	517,354.36	5,689,930.39
Total		$67,916,062.15

THE First NATIONAL BANK and Trust Company of Tulsa

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

Herzog's Marine 36, 636 s 198 w nec 26-25-28, pump 10 bbls, td 160 ft.

Kern County: Buena Vista Hills—Standard's 89-11D, 3088 n 2091 e swc 11-32-24, pump 26 bbls, 82 ft perf 2703 ft, td 2705 ft.

Los Angeles County: Aliso Canyon—Tide Water's Porter 26, 558 s 3299 w Sta 84, LA City Bndry, 15,000 gas, spray oil, 220 ft perf 7840 ft, 24/64 bean, 2240/2840 lbs, td 7844 ft.

Los Angeles County: Coyote-East—Graham & Loftus' G&LP 2, 2150 n 2150 w se cor 13-3-10, abnd td 4687 ft.

Los Angeles County: Dominguez—Union's Callender 78, 2116 n 4368 w c ls Victoria & Central, flow 593 bbls, 76/64 bean, 440/150 lbs, 542 ft perf 7373 ft, td 7375 ft.

Los Angeles County: Inglewood — Tide Water's Vickers 53, 1950 n 1000 w sec 7-2-14, flow 190 bbls, 318 ft perf 3074 ft, td 4458 ft.

Los Angeles County: Long Beach—Shell's White-Moser 1, 175 s 125 e nwc Stakemiller lease, pump 95 bbls, 647 ft perf 3315 ft, td 3550 ft, plugged 3320 ft.

Los Angeles County: Potrero—Tide Water's Cypress 5, 250 n 1020 e c 34-2-14, flow 242 bbls, 14/64 chk, 53 ft perf 5525 ft, 220/600 lbs, td 5525 ft.

Los Angeles County: Wilmington — Barnhart-Morrow Cons. Sherman 2, 414 n 130 e c ls "M" & McDonald, flow 296 bbls, 37/64 bean, 65/0 lbs, 758 ft perf 3715 ft, td 3715 ft. A. D. Mitchell's Breslin 1, 114 n 130 w c ls "M" & Bayview, flow 188 bbls, perf 3040-3120 ft, 3210-3290 ft, 3490-3625 ft, 3670-3710 ft, td e cls Ford & Anaheim, flow 598 bbls, perf 3710 ft. Union Pacific's UP 214, 5715 s 3095 3034-3150, 3193-3295, 3324-3356, 3369-3428, 3449-3519 ft, td 525 ft. Westport Oil Co.'s WP-7, 145 s 100 w sw cor "Q" & Frigate sts, pump 100 bbls, perf 297-3364, 3410-3495, 3532-3756 ft, good oil sand 3740-3757 ft, td 3761 ft.

Orange County: Huntington Beach — West American Oil Co.'s Ashton 10, 26 n 1004 w nwc Westminister & Schleicher, pump 125 bbls, perf 4100-4134, 4225-4254, 4266-4280 ft, td 4714 ft.

Santa Barbara County: Careaga Area—Royalty Service Corp.'s Careaga 1, 100 s 3150 e nwc 8-8-33, trace oil, salt water, top Miocene 4520 ft, abnd 5578 ft. A. N. Macrate's Fernandez 7, 990 n 990 w e¼ cor 26-10-34, flow 2500 bbls, 578 ft per 4319 ft, td 4320 ft. Union's Fleisher 3, 330 s 990 e nwc 31-10-33, pumper, no est, 575 ft perf 4709 ft, Miocene 4170 ft, td 4710 ft.

WILDCAT STARTS

Kern County—Seaboard Oil Corp.'s Fuhrman 1, 28-28-28, lcn, Kern River area.

Los Angeles County—Axis Petroleum Co.'s Rowland 1, 21-2-10, lcn, Puente Hills area.

Madera County—Shell's Chowchilla Farms 6, 18-10-14, Rigging, Chowchilla area.

Ventura County—Delroy Petroleum Corp.'s Fisk 3, 22-5-18, lcn, Piru area.

Michigan

Drilling Resumed After Space Plan Clarification

Partial clarification of M-68 started operations in new Lincoln, Clare County field, and in South Roscommon field, but uncertain status still holding up work in Reed City and other older pools. Only eight starts approved by State Department of Conservation, one wildcat, and all state permits carrying underscored proviso as "subject to M-68 or other federal orders."

Clare-Lincoln Field: State and operator approval of a 40-acre spacing program of the deferred drilling type will bring at least five immediate starts in new field. Discovery is flowing 191 bbls day, 2½-in tubing, from Dundee at 3941 ft. Plan calls for a uniform spacing of one well in the approximate center of the se se se se of each 40-acre unit or a diagonal 20-acre pattern with the nw nw nw location left blank. Swanson Consolidated Oil Co. farmed out from one of Discoverer H. J. Hirzel's syndicates 200 acres in play calling for cash payment of $60,000 and 1/8 to 1/16 overriding royalty.

Roscommon Area: Sun Oil Co.'s Bauman 1, Section 29-24n-1w, originally completed for 89 bbls oil from Monroe at 4201 ft increased to 166 bbls with second acid treatment.

COMPLETIONS

Arenac County: Adams—Pure's McTaggart A4, se nw se 22-19n-3e, flow 1090 bbls 10 hr natural, Dundee lime 2980-88 ft, td 2990 ft.

Bay County: Kawkawlin—Gulf's Friebe 2, c n½ sw ne 34-15n-4e, Dundee 2766-2930 ft, acidized, 224 bbls 10 hr, td 2936 ft.

Clare County: Wildcat—Mogul Oil Co.'s Jankowski 1, c n½ ne nw 14-20n-3w, Traverse 3245 ft, Monroe 3980 ft, td 4172 ft, abnd.

Clare County: Winterfield—Taggart Bros. Co.'s Landers 97, c sw 20-20n-6w, 16,650,000 gas, Stray sand 1370 ft. Sun's Goodrich 2, c e½ ne sw 32-20n-6w, Traverse lime 3055-3100 ft, 2500 ft oil 18 hrs, acidized 1000 gallons, est 76 bbls, td 3110 ft.

Lake County: Wildcat—W. P. Shoemaker's Reese 1, c e½ ne se 29-19n-14w, abnd 1000 ft.

Missaukee County: Wildcat—Union Drilling Co.'s Kelly 1, c s½ se ne 22n-7w, Traverse 3281 ft, Dundee 3949 ft, td 4190 ft, abnd.

Osceola County: Reed City—Pure's Richard 2, c n½ ne se 19-18n-10w, flow 192 bbls 6 hrs, Traverse 2924-37 ft, td 2940 ft; Brock 4, c n½ se sw 20-18n-10w, flow 457 bbls 50 min, Monroe 3510 ft, td 3558 ft; Gocha-Hewitt 1, c n½ se nw 32-18n-10w, flow 206 bbls 4 hrs, Monroe 3575 ft, td 3608 ft. Ohio's Leusby 1, c s½ nw sw 20-18n-10w, flow 390 bbls 3 hrs, Monroe 3597 ft, td 3620 ft.

Saginaw County: Wildcat—Sun's Rosewig 1, c n½ nw ne 26-11n-1e, abnd 3200 ft.

Van Buren County: Bloomingdale—J. F. Burton's Ampey 2, se ne se 2-1s-14w, acidized, 76 bbls, Traverse 1290 ft, td 1301 ft.

WILDCAT START

Ottawa County—Muskegon Oil Corp.'s Van Gelderen 1, sw nw nw 11-5n-15w, rig.

Rocky Mountain Area

Two Slight Extensions Of Wyoming Production

Two slight extensions to proved areas in Wyoming and two wells showing for

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additional extensions mark quiet Rocky Mountain week. Eastern Colorado wildcat fails.

Lost Soldier: Slight extension to north of Tensleep pool, Lost Soldier field, Sweetwater County, Wyoming, Sinclair's Hughes 8, CWL SW SW 2-26n-90w, swabbed 500 bbls, 2½-in tubing, 4197-4456 ft.

Cole Creek: Cole Creek, Natrona County, Wyoming, extended quarter mile west by General's 3-21-G, NW SW NW 21-35n-77w, pumping 120 bbls daily Shannon sand 4556-96 ft, td.

Showing for Extension: Flank well, Ohio's Diamond Cattle 3, CWL E SE 27-20n-78w, Rock River, Carbon County, swabbing Dakota 3365 to td 3517 ft. Husky Refining's Stump 2, SE SW SW 21-53n-101w, rotary, td 4431 ft, 7-in 4390 ft atop Embar, swabbing for good completion extending Cody Dome field to north, Park County, Wyoming.

South Towner: Stanolind O. & G.'s Snell 1, c SE SW 7-20s-41w, rotary, South Towner area wildcat, Kiowa County, eastern Colorado, reported abandoning in Arbuckle at 5994 ft.

Montana

COMPLETIONS

Phillips County: Bowdoin—Montana Dakota Utilities Co.'s Mathews 625, c se se 3-31n-34e, 0.25 gas, 185 lbs rp, Bowdoin sand 750-850 ft; Federal Bank 658, c sw se 1-31n-34e, 0.627 gas, 220 lbs rp, Bowdoin 760-840 ft; Bell 662, c lot 3, 4-31n-34e, 0.297 gas, 185 lbs rp, Bowdoin 765-85 ft, td 875 ft; Reilly 667, c nw se 26-32n-33e, Bowdoin 710-790 ft, 0.295 gas, 220 lbs rp; Wild 670, c ne nw 19-31n-34e, rotary, 1.03 gas, Bowdoin 910-70 ft, td 1027 ft.

Toole County: Kevin-Sunburst—Big West Oil Co.'s Dahlquist 2, c se 6-34n-4w, 1.3 gas, td 2147 ft.

Wyoming

COMPLETIONS

Natrona County: Cole Creek—General's 3-21-G, nw sw nw 21-35n-77w, Shannon sand 4564-96 ft, pump 120 bbls.

Weston County: Osage—T. H. Oil Co.'s 1, c sw nw 3-46n-63w, abnd 350 ft.

New York

COMPLETIONS

Allegany County: Messer Oil Co., Vosburg farm, Bolivar, 5 bbls, 1369 ft; Vosburg farm, 5 bbls, 1371 ft. South Bolivar Oil Co., McKelvey farm, Bolivar, 6 bbls, 1345 ft. Producers Oil Corp., Keller-Scott farm, Wirt, 9 bbls, 1069 ft. Brothers Oil Co., Crandall farm, Bolivar, 8 bbls, 1381 ft. Ebenezer Oil Co., Vincent farm, Scio, 7 bbls, 1136 ft. Hog Brook Oil Co., Reid farm, Alma, 10 bbls, 1416 ft. The Otsquago Corp., Pike farm, Alma, 10 bbls, 1389 ft. Summit Oil Co., Doty farm, Scio, 5 bbls, 1239 ft. Dick Oil Co., Bradley farm, Bolivar, 11 bbls, 1424 ft. McEbenwood Oil Co., Pingrey farm, Anover, 9 bbls, 1320 ft. Dot Oil Co., Brown farm, Alma, 5 bbls, 1316 ft. H. W. Patterson et al, Browning farm, Scio, 6 bbls, 712 ft. Scio Oil & Gas Co., Fuller farm, Amity, 8 bbls, 780 ft. H. W. Patterson et al, Fuller farm, Amity, 5 bbls, 720 ft. Fuller farm, Amity, 5 bbls, 757 ft. Messer Oil Co., Koehler farm, Clarksville, 5 bbls, 1389 ft. Gary Oil Co., Smith farm, Genesee, 5 bbls, 1425 ft. Sloan & Zook, Ramsell farm, Bolivar, 7 bbls, 1429 ft. I. & H. Oil Co., Clemons farm, Wirt, 5 bbls, 1438 ft.

INTAKE WELLS

Messer Oil Co., Vosburg farm, Bolivar, 1370 ft; Vosburg farm, Bolivar, 1359 ft. Bradley Prod. Corp., Nobles farm, Alma, 1268 ft. South Bolivar Oil Co., McKelvey farm, Bolivar, 1353 ft. Star Oil Co., Neff farm, Wirt, 1246 ft. C. H. Christman & Son, Middaugh farm, Scio, 1388 ft. Bradley Prod. Corp., Rolls farm, Alma, 1260 ft. Curt Oil Co., Williams farm, Alma, 1343 ft. Albert Oil Co., Coats farm, Alma, 1058 ft. Marsh Oil Co., Fay farm, Bolivar, 1421 ft. H. W. Patterson et al, Browning farm, Scio, 715 ft. L. & D. Oil Co., Browning farm, Scio, 529 ft.

Ohio

COMPLETIONS

Ashland County—Konrad & Bew **Morr** 3, 0.06 gas, 702 ft.

Athens County—O'Mara et al's **Cincinnati Mining** 4, 0.04 gas, 790 ft.. Bern Oil **& Gas** Kenny 2, abnd 1143 ft. Snider et al's **Pennybecker** 2, abnd 1102 ft McBill's Sapp 6, **abnd** 380 ft.

Coshocton County—Preston Oil Co.'s **Donaker** 7, 85 bbls, 3130 ft.

Guernsey County—C. C. Wharton's **Albright** 1, abnd 1103 ft.

Holmes County—H. E. Perkins' **Fee 1, 20** bbls, 3132 ft.

Knox County—Knox Exploration Co.'s **Frye** 2, abnd 3107 ft. Delga Oil Co.'s **Cochran 1,** abnd 550 ft.

Licking County—Industrial Gas' **Davis 10,** abnd 1400 ft. Gail Earley et al's **Gardner 4,** 0.3 gas, 2622 ft.

Meigs County—Downie et al's **Gardner 1,** abnd 745 ft. H. B. Walker & Co.'s **Person 1,** 0.1 gas, 1650 ft.

Morgan County—Ohio Fuel's Snyder **2, 0.07** gas, 5306 ft.

Muskingum County—Ohio Fuel's **Staker 23,** 1.1 gas, 4227 ft, Wasson & Co.'s Howell **1, 15** bbls, 4105 ft. Felix Gerst, Casper **Scott 42,** abnd 571 ft.

Perry County—Pure's Williams 3, **102 bbls,** 3206 ft, Palm Oil Co.'s Amerine et al, **abnd** 3300 ft. Corning Prod. Co.'s Dennis **1, abnd** 3725 ft.

Stark County — J. C. Steiner's **Smith 1,** 0.15 gas, 4614 ft. Lyons et al's Dickens **3, 0.15** gas, 4644 ft.

Tuscarawas County—Egan & Murphy, **Goodling** 1, abnd 1184 ft.

Washington County — Interstate **Gas Co.'s** Roberts 2, 0.05 gas, 1270 ft. Harry **Binegar's** Devore 2, abnd 1010 ft. Orndoff **& Burt's** Rudolph 1, 0.28 gas, 930 ft.

WELLS DRILLED DEEPER

Athens County—Ohio Fuel's King **3, 0.06** gas, 1603 ft.

Washington County—Henderson Oil's **Cook** 1, 0.1 gas, 1225 ft.

Pennsylvania

COMPLETIONS

Armstrong County—Huber Gas Co.'s **Boyer** 1, abnd 1459 ft. Local Co.'s Held 1, **0.1 gas,** 3046 ft. Peoples Nat. Gas Co.'s Rupert **1, 0.03** gas, 1736 ft. R. C. Gailbraith's Alcorn **2, 0.03** gas, 3205 ft.

Clarion County—R. M. Burnham **Gas Co.'s** Burnham 1, 0.02 gas, 2873 ft. Swartfager **et** al's Smith 1, 0.1 gas, 2781 ft.

Fayette County—Greenboro Gas Co.'s **Ross** 1, abnd 2553 ft. Geo. H. Bortz et al's **Bortz 2,** 0.05 gas, 2437 ft.

Green County—Mfgrs. Lt. & Heat Co.'s **Carpenter** 1, 0.08 gas, 3481 ft; Garner 4, **0.88 gas,** 2731 ft.

Indiana County—T. W. Phillips G. **& O.** Co.'s McHenry 1, 0.04 gas, 1681 ft.

Washington County—Mfgrs. L. & H. **Co.'s** Friend 1, 0.15 gas, 2936 ft.

WELLS DRILLED DEEPER

Fayette County—Mayne et al's **Wood 1,** (otd 1840), abnd 2670 ft.

Greene County—Peoples Nat. Gas' **Hogue 1,** (otd 2300), 0.09 gas, 3153 ft.

Washington County—Carnegie's **Gilkeson 2,** (otd 885), 0.1 gas, 1785 ft.

West Virginia

COMPLETIONS

Cabell County—Chaffin Co.'s **Gearhart 1,** 0.9 gas, 3310 ft.

Clay County — Virginia's Brown-Swann-Goshorn & Geary, 5 bbls, 1834 ft.

Ritchie County—Howard Hall's **Milbauer 1,** 3 bbls oil, 0.04 gas, 1835 ft. West **Virginia** Investment's Park 26, 30 bbls, 1955 ft.

Upshur County—Cumberland & **Allegheny's** Harris 314, 0.09 gas, 2120 ft.

Wirt County—S. W. Douglas' **Kidwell 17,** abnd 383 ft. W. C. Patterson's Swisher **23, 1** bbl, 1208 ft.

Wood County—E. C. Hartman and **Geo. D.** Athey's Palmer 1, 2 bbls oil, 0.02 gas, **1375 ft.**

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MEN IN THE INDUSTRY'S NEWS

STUART E. BUCKLEY, Humble Oil and Refining Company, Houston, was elected chairman of the Gulf Coast Section of the American Institute of Mining and Metallurgical Engineers at its election meeting January 13, succeeding J. U. Teague, Hogg Oil Company. Other new officers are James McKean Bugbee, Baroid Sales Division of National Lead Company, Houston, F. B. Plummer, University of Texas, Austin, and Henry E. Gross, Texas A. & M. College, College Station, all vice chairmen; Alexander Deussen, geologist, Houston, secretary-treasurer; Paul Weaver, Gulf Oil Corporation, Houston, and Z. W. Bartlett, Freeport Sulphur Company, Freeport, Texas, directors.

RUSSELL D. HEATH, Westinghouse Electric International Company, recently was elected president of the New York Chapter of Nomads for 1942. Other officers are, vice president, I. Frank Brown, Baash-Ross Tool Company; treasurer, F. J. Olson, Cardwell Manufacturing Company; assistant treasurer, Herb E. Maland, Chiksan Tool Company; secretary, Val R. Wittich, export representative; assistant secretary, Charles J. DeLay, Continental Emsco Company; members of board of regents, J. H. Baird, Byron-Jackson Company, and J. A. Thomas, Parkersburg Rig and Reel Company; sergeant-at-arms, A. V. Simonson, export representative; assistant sergeant-at-arms, G. B. Flanigan, Chain Belt Company.

C. O. WILLSON, editor of the Oil and Gas Journal, was named president of the Tulsa Chapter of Nomads recently. Paul E. Fitzgerald, Dowell, Incorporated, was elected vice president. Reelected to the post of secretary-treasurer was H. M. Cosgrove. W. G. Green, vice president, Engineering Laboratories, Inc., and Fred E. Cooper, Allis-Chalmers Manufacturing Company, were named national regents.

M. L. COOKE, appointed by the United States Government to cooperate with a Mexican representative to appraise the value of expropriated oil properties in Mexico, is reported to have returned to Washington late last week. Since early in January, Cooke has been in Mexico City consulting with Manuel J. Zerada, Mexican appraiser. He is expected to return to Mexico after reporting in Washington.

EARL B. NOBLE, chief geologist of the Union Oil Company of California and vice president of the American Association of Petroleum Geologists, was main speaker before the Houston Geological Society January 22. Noble recently returned from a two-months reconnaissance survey of Costa Rica and parts of Guatemala, and he talked about the trip, illustrated with motion pictures.

JOSEPH M. WEAVER, president of the States Oil Corporation, Eastland, has been elected president of the West Central Texas Oil & Gas Association, succeeding W. J. Rhodes of Breckenridge. C. W. Hoffman of Eastland and J. E. Whiteside of Brownwood were reelected vice presidents, and Rhodes was also chosen as vice president. A. H. Furse of Eastland was elected treasurer, and will also temporarily serve as secretary, succeeding J. C. Watson, who resigned effective February 1.

RONALD K. DeFORD, geologist for Argo Oil Corporation, has been elected president of the West Texas Geological Society, Midland. Walter G. Moxey, Stanolind Oil & Gas Company, and Lloyd Haseltine, Magnolia Petroleum Company, all of Midland, were chosen vice president and secretary-treasurer, respectively.

MARTIN DAVEY, JR., East Texas operator, has been elected president of the Palestine, Texas, Chamber of Commerce.

JACK W. STEELE, chairman of the Federal Tender Board in the East Texas field since March, 1936, has departed for Washington where he will resume his duties as acting director of the petroleum conservation division of the United States Department of Interior.

S. F. SHAW, consulting engineer of San Antonio, Texas, is examining properties in Kentucky.

W. J. WILSON has resigned as assistant secretary of The Ohio Oil Company and head of the land department at Tulsa, to become executive vice president of Leader Oil Company of the same city.

LESLIE C. RICKEY, engineer, Stanolind Pipe Line Company, has been transferred from Marysville to Drumright.

JOE W. LACKEY, Bell Oil & Gas Company, Tulsa, is transferring to Artesia, New Mexico, where he will be auditor and in charge of the accounting department.

HOMER A. SCOTT, district land man for The Ohio Oil Company at Wichita is entering the Tulsa office to take charge of the land department. His position will be taken by J. M. Barrett, Jr., now of Edmond, Oklahoma, while the latter's work will be handled by Virgil C. Cole, leaving the Tulsa office for the field.

NORVAL BALLARD, consulting geologist, Tulsa, discussed "Regional Geology of the Dakotas" before Tulsa Geological Society in meeting at University of Tulsa.

R. L. PEURIFOY, president of the petroleum Industries Association, resigned at a meeting at Corpus Christi, Texas, January 14, and will go to Washington soon where he will be field representative for the national defense division of the United States Office of Education for the duration. Dr. Don L. Harlen of the Texas Company, Freer, Texas, presented a paper on "Gravel Pack in Repressuring Operations."

JAMES E. PEW, Virginian Gasoline & Oil Company, Charleston, W. Va., has been appointed assistant to P. M. Raigorodsky, head of the natural gas and natural gasoline section of the Office of Petroleum Coordinator.

W. S. S. RODGERS, president of The Texas Company, has been named by the National Association of Manufacturers as a director-at-large to serve on the 1942-1943 board.

CAPTAIN GEORGE S. BERRY, JR., Fort Worth district land man for Sinclair Prairie Oil Company, has been called to active duty in the Army, and will be assigned to the general staff corps at Washington.

BERTE R. HAIGH, geologist for University of Texas, is chairman of committee created by the West Texas Geological Society to select names for new pools in West Texas and recommend same to the Texas Railroad Commission. The committee also includes: John M. Hills, consulting geologist, and Lee Cornelius, Gulf Oil Corporation, all of Midland.

A. W. HERRINGTON, recently was elected president of the Society of Automotive Engineers. He is president of Marmon-Herrington Company of Indianapolis, and is also chairman of the board of directors of The Merz Engineering Company, a Marmon-Herrington subsidiary. The Merz Engineering Company specializes in the design and manufacture of precision gauges, instruments and machines.

JAMES F. McNAMARA of New York, mill products sales manager of The International Nickel Company, recently was elected a member of the board of directors of Lukens Steel Company.

JAMES S. ANDERSON is now connected with the New York district sales office of The Babcock & Wilcox Tube Company, 85 Liberty Street, New York City.

HAROLD G. NEELY, president of Iron Mountain Oil Company and prominent in oil association affairs, has announced that the company will be dissolved. He will operate independently, retaining headquarters at Fort Worth. R. C. Barthold, secretary-treasurer, and a captain in the Army Air Corps, is scheduled to report for active duty February 1 at Washington. The company discovered the Avoca field, West Central Texas, and has other holdings in general area.

AL H. MEADOWS, vice president and one of the organizers of the General American Oil Company and affiliated companies with headquarters at Dallas, has been elected president, succeeding John W. Gilliland, who has disposed of his interests to operate independently, retaining office in Dallas. Malcolm E. Wil-

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son, who became vice president and director in 1936, was elevated to executive vice president. Bell-General Pipe Line Company is second largest independent pipe line company in East Texas field, and General American Gasoline Company, also an affiliated unit, operates a natural gasoline plant in same area.

C. E. EDGERTON, geologist for American Republics Corporation, has been transferred from Houston headquarters to San Antonio, where he will have charge of geological operations in the Southwest and the West Texas-New Mexico areas. Production activities in these combined areas are directed by Jerry Chesnutt, general superintendent with headquarters at San Angelo, Texas. Prior to January 1, the company operated as Republic Production Company.

LELAND JONES, geologist, Tulsa, has resigned his post with Bryan Petroleum Company, to become an independent consultant.

S. L. ROSE, California Company geologist, has been transferred from Tulsa to Ardmore.

EARL A. TARVER has been named head of the geological department of Superior Oil Corporation, Tulsa. Tarver was formerly assistant to the chief geologist of the company.

FRANK H. BOYD, for 30 years divisional manager of Cleveland territory, American Seating Company, has been appointed sales manager of S. G. Frantz Company, manufacturers of magnetic separators, New York.

MISS S. GRACE HOWER, aero-geologist, has been added to the Tulsa staff of Seismograph Service Corporation, department of aero-geology. Miss Hower was formerly geologist with Aero Exploration Company, Tulsa.

J. D. COLLETT, 72, pioneer Texas operator and a leader in association activities until illness forced his retirement three years ago, died January 22 at his Fort Worth residence. He served five terms as president of the Texas Division of Mid-Continent Oil & Gas Association and was head of the general association almost an equal period. He had been a director of the American Petroleum Institute, and when the National Recovery Act was applied to the oil industry in 1933 he served as general chairman of District 4 of the regional planning and coordinating committee. A native of Galveston, he was educated at Austin, and worked for a mortgage firm at Fort worth before making his entry into the oil business at Spindletop in 1901. Upon the passing of the flush stage of this field he returned to Fort Worth to establish an insurance firm, then reentered the oil business as an operator at Ranger. He later participated in developments in Wichita County, and prospered through operations in West Texas. Survivors include his widow and a son, J. Daviss Collett of Houston.

CHESTER A. EVERTS, 51, president of Everts Drilling Company and Yates Ranch Oil & Royalties Company, Dallas, Texas, died January 17 at Rochester, Minnesota.

FRANKLIN F. JONES has been named general manager of The Cavins Corporation, a new Texas corporation servicing the Mid-Continent area for the Cavins oil-well-cleanout tools and specialties. Other officers of the organization are: Paul Cavins, president; Roy L. Arterbury, vice president and treasurer; K. S. Mandell, secretary.

Operating headquarters of The Cavins Corporation are in Houston with offices and service crews at: Houston, Dallas, Corpus Christi, Odessa, Pampa, Kilgore, Texas; Lake Charles, Louisiana; Artesia, New Mexico; Seminole, Oklahoma; and Ellinwood, Kansas. The new corporation succeeds The Cavins Bailer Service of Texas and all branches and agencies which have heretofore handled Cavins products.

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Squeaks from the Bull Wheel

And So On——

He had arrived home late and his wife was giving him a piece of her mind.

"I don't care, my dear," he said, getting really worked up. "I mean what I say, I'm a man who calls a spade a spade."

"Maybe, Henry," she said, "but you don't call a club a club. You call that working late at the office."

Promising

"So you're not getting married after all? I though you were engaged to a promising architect?"

"I was, but he didn't keep his promise."

Enlargement

A young woman went into the photographer's shop and, producing a photo of her soldier friend, said: "I want this enlarged."

"Would you like it mounted?"

"Oh, yes, he'll look nice on a horse."

Another Injustice to Ireland

"So the film gave the impression that the Irish are a disorderly lot, did it?... I suppose you protested?"

"Shure! We wrecked the place."

Language Quiz

"Give me an example of paradox."

"Two M.D.'s."

It Is Silly

The drunk staggered into the telegraph office, grabbed a telegram blank, and wrote: "Higgledy. Higgledy. Higgledy. Higgledy. Higgledy. Higgledy. Higgledy. Higgledy. Higgledy."

The clerk looked at the message and said, "You have only nine words here. Do you wish to add another 'higgledy'?"

The drunk considered this suggestion thoughtfully for some time. Finally he said, "No, I think not. It might make it look silly."

Tit for Tat

"You are accused of hitting this Chinese over the head with a vase. What is your reply to this charge?"

"Well, your honor, he was threatening me in broken English, so I replied with broken China."

We All Can

"Son, I never knew what it was to kiss a girl until I courted your mother. I wonder if you will be able to say the same to your children."

"I think so, Dad, but not with such a straight face as yours."

Bam!

Actor: "So you're going to use me in your next play? You've really discovered at last what I am!"

Director: "Yeah, hurry up and get into the hind legs of that stage horse over there."

Cannibal Stuff

"I wish we'd get a few shipwrecked sailors washed ashore," mused the cannibal chief. "What I need is a good dose of salts."

Looking Ahead

The class had been photographed and the teacher was urging her students to buy prints of the picture.

"Think how nice it will be to look at the picture in years to come, when you are grown up," she said, "You'll be able to look at it and say: 'There's Alice, she's a nurse; and there's Carl, he's a business man, and—'"

The bad boy interrupted. "Yes," he said, "and there's teacher—she's dead."

Misunderstood

Now, tell the court how the accident happened.

Well, I dimmed my lights and was hugging the curve * * *

So you were. Fifty dollars and fifty days.

Not After February 1

"Mama, what becomes of a car when it gets too old to run?"

"Somebody sells it to your father."

EVERYONE IN CHARGE OF OIL FIELD OPERATIONS NEEDS A COPY OF

ORDERS M-68 and P-98

These two priority orders cover all types of equipment and material used by the oil industry. In addition, THE OIL WEEKLY has compiled a Simplified Outline of Procedure for Obtaining Various Types of Equipment and Material for Production and Pipe Line Operations in accordance with these orders.

Copies of the two official orders, M-68 and P-98, together with the outline of procedure for obtaining equipment have been incorporated into a convenient 12-page booklet (8½" x 11") available at the following prices, postpaid:

Quantity	Price	Quantity	Price
1 to 24 copies, each	$0.50	50 to 99 copies, each	$0.35
25 to 49 copies, each	.45	100 to 200 copies, each	.25

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Furthermore, tool joints made of Chromium-Molybdenum steel can have bores large enough to give free fluid flow. There need be no excess thickness in the walls. And the joints are mud proof and pressure proof.

Molybdenum steels have dozens of economy-producing applications in oil work. Complete technical data is contained in our book, "Molybdenum Steel in Oil Production", which is sent free on request.

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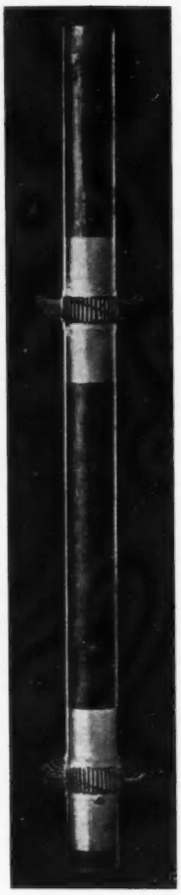
MOLY

NOTES FOR THE Equipment Buyer and User

Liner Section

B AND W, INC.

B. and W, Inc., Houston and Long Beach, makers of B and W has announced the B and W guide-mounted liner section, with the following field applications:



On deepening jobs below 5½- or 7-inch oil strings to correct high gas-oil ratios or water entrance; on deepening jobs to develop lower productive sands; on workovers where it is necessary to sidetrack out through a 5½- or 7-inch oil string.

It is desirable to use a liner with as large a diameter as possible on these workovers. Wall cleaning guides are mounted in the wall of the casing and it is possible to run 4-inch O. D. liner through 5½-inch oil string or 5½-inch liner through 7-inch oil string.

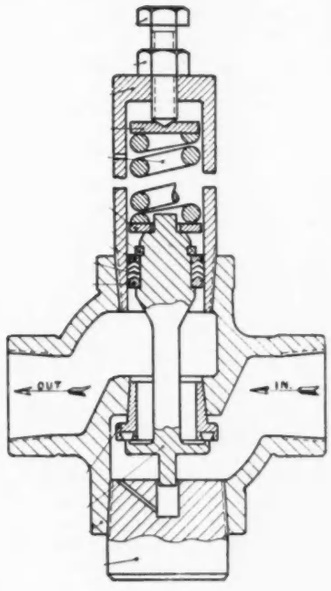
The liner sections are made up in 6-foot lengths of plain-end pipe with two wall cleaning guides mounted at 3-foot centers. These sections may be threaded and coupled or inserted. Short liners may be made up entirely of a series of these sections. On longer liners, these liner sections may be installed at selected levels.

Standard cementing practice is followed in cementing this liner and the wall cleaning guides assist in centering the liner and removing the mud cake during the cementing operation.

Well Purger

PRODUCTION ENGINEERS, INC.

Production Engineers, Inc., Houston, has announced the Well Purger after a testing and proving period of three years. The Purger is used on wells which tend to die due to water or oil accumulating in the tubing, also on wells that the operator desires to flow on small chokes in controlling gas-oil ratio, where additional production at intervals is necessary, to obtain allowable, or to prevent killing the well. It is manufactured in two sizes, the low-pressure model is designed for opening pressures of 300 pounds or less, the high-pressure model for opening above



300 pounds. The terms "high pressure" and "low pressure" refer only to the size spring used, as each Purger is subjected to 3000 pounds test pressure.

The Purger is a pressure-controlled valve and is installed in a by-pass around the regular production choke on the Christmas tree, an additional choke being placed in the by-pass, downstream from the Purger. When the tubing pressure drops to any point selected, due to the well loading up with water or dead oil, the Purger valve opens, allowing the well to produce through its regular choke and the additional choke in the by-pass. This increased rate of flow produces the accumulated water or dead oil from the tubing, which allows the tubing pressure to build back up. At the time the tubing pressure has increased to 10 percent above the pressure at which the Purger valve was set to open, the Purger valve closes, restoring flow through the regular choke. A simple screw adjustment is provided whereby the opening pressure of the valve can be adjusted at will by the operator.

The Purger is compact, the low- and high-pressure models being only 20 and 26 inches high, respectively. Due to its simplified design, compact construction and minimum number of parts, the unit has long life expectancy.

Paint

ARCO COMPANY

The Arco Company, Cleveland, Ohio, has announced a new type of low visibility paint, said to possess exceptional heat deflecting qualities for use in concealing defense structures and equipment.

Already in use on certain government properties, the paint meets tentative Navy specifications for infra-red reflecting paints for use on fuel storage tanks, buildings, and certain types of equipment where dark colors as well as heat reflecting qualities are required. It has just been offered commercially under

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the trade name of "Infray" and is being manufactured in green, tan, black and four intermediate shades which, when properly selected, will meet the requirements of good camouflage in any sort of terrain. All seven shades are hard to see from the air and throw off most of the heat of the sun's rays that would normally be absorbed.

Seamless Steel Tube Institute Offers New Service to Users

The Seamless Steel Tube Institute, Gulf Building, Pittsburgh, Pennsylvania, has announced the establishment of a new service whereby purchasers may obtain information on the availability of various grades and sizes of seamless steel tubing for new or special wartime requirements.

This step, it is explained, was taken for the benefit of two classes of tube purchasers. First, are those who have bought certain grades of tubing for use in peace-time products, but may be unfamiliar with sources of supply for other or special grades of tubing required for war equipment. Second, and perhaps more frequently encountered today, are those manufacturers who never before needed seamless steel tubing. This is particularly true in the case of certain specialties which are not manufactured generally, and may be available only from two or three mills. Some mills confine their output to carbon steel tubing exclusively, others specialize to a greater or lesser extent in the production of tubing of various alloys such as the stainless analyses and many of the SAE grades.

Vapor Recovery Company Adds Fifth New Unit

Vapor Recovery Systems Company, Compton, California, recently put in service a new foundry, the fifth integral unit to be added in recent months. The warehouse, enlarged machine shop, welding and shipping units were completed early in October. All company products are now manufactured under one roof.

Pumps

Oil Well Supply Company, Dallas, Texas, has issued three new descriptive bulletins. They are: 1. TC-5-A twin crank pumping unit; 2. TC-5H and TC-8 twin-crank pumping units; 3. SC-12A and SC-17A single-crank pumping units. The SC-12A and SC-17A pumping units are new additions to surface pumping equipment.

Boilers

The Babcock & Wilcox Company, 85 Liberty Street, New York, has issued an 8-page booklet describing the B&W Integral-Furnace Boiler Classes 9, 12, and 15, for lower capacities (as low as 135 horsepower or 9000 pounds steam per hour) and for stoker or oil firing. Booklet contains illustrations and drawings defining details of operation and construction features in this new design of boiler and indicating principal dimensions for various standard sizes.

Logging

Lane-Wells Company has issued two new bulletins. The Electrolog Bulletin has been completely revised and brought up to date, and contains a discussion on new services the company is now in a position to make available.

A comparison is given of Electrolog and Radioactivity Log curves, showing the correlation of the two types of curve made in uncased and cased hole. An explanation is given of the Temperature Survey Service, and pertinent data is given on the comparative weights of Electrolog cable in drilling mud.

The Quinta-Seal Packer and Liner Hanger Bulletin contains engineering information on the use of these specialized tools.

Thread Compound

I. H. Grancell, 2905 East First Street, Los Angeles, California, has issued a new bulletin on 'Bestolife, a lead seal thread compound used in overcoming galling of tool joints, drill stems and casing.

It is said to lengthen life of threads, increase packing life and prevent scoring.

Purification

Technicraft Engineering Company, 5610 South Soto Street, Los Angeles, California, has issued a new bulletin on the "SterOzone" method of water purification without use of chemicals.

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You can't hold oil with *bad leaky* tank bottoms. But, you can make those bottoms tight and dry with "Natasco" Plastic Tank Bottom Cement.

In addition, you insulate the steel against Corrosion for long lasting service.

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These surfaces, when unprotected, are subjected to vicious damaging corrosion. When protected with a combination of "Natasco" materials, this costly steel is insulated against corrosion and the hazard eliminated.

TANK TOPS

"Natasco" Vapor-Tight sealing of tank tops minimizes evaporation from tankage, retains volume and gravity of oil and reduces fire hazards.

For complete information

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. . . Es casi imposible obtener acero para reparación y conservación de tanques—y por esta razón le conviene imponerse del "Natasco" el substituto y protector de méritos comprobados.

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El petróleo se escapará cuando los fondos de los tanques están en mal estado. Pero puede hacer que los fondos queden herméticos y secos usando el cemento plástico "Natasco" para fondo de tanque.

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El material "Natasco" para el cierre herméticos contra el vapor de las tapas de tanques reduce la evaporación de los tanques, retiene el volumen y densidad del petróleo y reduce el peligro de incendio.

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